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The past few years have been highlighted by management experiments with variants of a 4-day week (particularly in the U.S.) and flexible working time schedules (particularly in Europe). These are illustrations of the changing patterns of work and free time that have begun to assume the status of a new technology, and which are the objects of study here in order to: (1) accumulate available information and experience associated with administrative experiments in work scheduling and their potential consequences in terms of impact upon human performance and values, social and psychological adjustment, and the quality of life, (2) explore implications for decision-making, policy and practice that may offer guidelines to individuals, organizations, and political and social institutions, and have bearing upon organizational effectiveness, regulations and laws, union and management philosophy and tactics, family life, leisure activities, political orientations, employment stability and mobility, economic theory, educational programing, and other aspects of our social systems, and (3) provide recommendations for programs of research to fill significant gaps in relevant areas of knowledge. A bibliography of 106 references in included. (Editor)

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Changing Schedules of Work:

Patterns and Implications

Albert S. Glickman
Zenia H. Brown

Final Report
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CHANGING SCHEDULES OF WORK:
PATTERNS AND IMPLICATIONS

Albert S. Glickman
Zenia H. Brown

FINAL REPORT

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BRIEF

The literal title of this report is "changing schedules of work." However, in the years ahead we will be also increasingly concerned with free time and how it can be beneficially utilized. Fuller consideration of accompanying problems of psychological and sociological adjustment in a post-industrial era will be needed. Work and leisure are parts of one life--not separate lives.

In years past, work schedules were dominant in determining the schedule and content of life styles and activities. This is no longer the case. In some occupations, holidays and vacations, Saturdays and Sundays, retirement and education already add up to as much or more time off from work as time on the job. Such conditions have brought us the luxury of greater flexibility in use of time, along with the problems that greater flexibility creates.The problems and opportunities have in the past few years been highlighted by experiments with variants of a four-day week (particularly in the U.S.) and flexible working time (particularly in Western Europe).

The emphasis in this report is upon issues, alternatives and interactions involved in dealing with these problems. It deals with the individual and organizational behavior side of the issues more than the economic side. Its orientation is heuristic and frankly speculative--perhaps provocative.

After review of work and non-work time and activity trends, we discuss recent experience with compact work weeks and "flexi-time."

Then we address the flexibility issue itself. What choices does the individual have? Is he aware of them? Is he prepared to cope with them? Can he grow with them? What options are available to employing organizations? What advantages do they offer? What limitations do they impose? How do they fit into the total social economic and governmental scheme? What adjustments are required for individuals and for organizations, immediately and in the long run?

In certain types of work, a worker must be available at a specific place at a specific time for a specific length of time. The structural characteristics of time, space, place, pace, equipment, laws, contracts and organization of work upon which he is dependent often provide little or no room for changes in an individual's behavior. In certain other settings, the individual is his own tool bag and he can largely determine how to budget his own time and effort. And, the number of jobs where this type of freedom is possible is increasing. Flexibility can be programmed into rigid job schedules, for example, by making better use of available computer programs to give the individual more choice in the days and hours he reports to work. Such sophisticated tools can be used to assure that the job gets done, while more nearly optimizing the benefits for all. Mr. Anthony Benn, who has served as Minister of Technology in Great Britain, has voiced the potential and general goal, thusly: "The evolution of modern management science will ultimately allow every single individual to be taken into full account in the evolution of social planning."

We can also foresee an increasing demand for flexibility in working time. Past demands have usually focused upon decreasing the number of hours spent working. But, with "days off" approaching and exceeding "work days" there has been a diversion of pressure toward greater flexibility. Although most workers still show a preference for more income over leisure, as more and more people exceed the minimum acceptable standards for quality of life, there may be more striving for individual fulfillment in attractive ways that require more free time than income.

If, indeed, we can expect to see more demand for flexibility and more possibilities for achieving flexibility, what can we expect in the way of problems? Surely, the increased flexibility in time allocation to work and non-work activities means increased complexity. There will be new requirements for management in business, government, and education. There will be new requirements for organization, processes, and structures. There will be new requirements for auditing and evaluation procedures. These requirements must be met with new policies. These policies must assure that the quality of life can be raised and extensively shared--rather than devalued by confusion and frustration.

We shall need policies to deal with the conflicting roles, purposes, and values, of trade unions and employers, for example. Both parties are likely to agree that the patterns of working time should be organized so that the individual worker ultimately derives the maximum possible benefits. However, there are disagreements as to what constitutes a benefit and how it is to be achieved.

A case in point is the four-day week with 10 hours per day. Labor laws and contracts regarding overtime payment based upon the 8-hour day become an issue when the alternative is presented. We face questions like: Will the elimination of restrictions upon flexibility, such as these, constitute a long-term benefit or a long-term liability for the individual worker? A consideration of the total quality-of-life increment that accrues from the trade-offs among various non-work and work options is necessary. We need to develop commonly understood operational definitions of value parameters and criteria of life quality. An increasing rate of change and occupational mobility within a context of greater flexibility will also place heavy demands upon management, unions, government and our social institutions to make reality out of the ideal of "lifetime learning." Perhaps nations will create ministries of "leisure and life quality" to complement the present ministries of labor, so that clearer purpose and better coordination of activities and resources to such ends can be achieved.

We shall need to deal with changing populations and motivations. By the end of the century, the population curve for blue collar workers may follow the same path as for agriculture workers. The motives of different working groups may also be expected to change in different ways. When basic needs are fulfilled, as is happening increasingly, motives change. More employees than ever before are better educated, and are expecting to reach more personally fulfilling, higher-level goals through their work and their leisure. They are less likely to be dominated by inhibiting reactions to the threat of pain, discomfort, and insecurity. They are more likely to want direct, personal involvement in determining when, where and how they will work--and in personally assessing values and risks involved in their exercise of choice.

If populations and motivations are changing, then institutions must also change. For them to be sluggish in response to demands, is to risk their credibility and viability. Cultural lag that spans even one generation is no longer tolerable. The conditions and values of life now change too fast to allow such indulgence.

Indeed, our institutions must adopt policies which have self-renewing flexibility built into them so as to be able to sensitively react to change. It is difficult to legislate flexibility. Yet, it is possible for government or any organization, to take the lead in supporting the necessary research for establishing and changing policies.

In the present instance, government can support an investigation of the actual and predicted effects of greater flexibility of working time. The possible role of new patterns of working time in stabilizing the labor market is a case in point. What can we expect? For many employers, a large dividend may accrue. A greater range of production, scheduling, work programming, and placement adjustments might contribute to less lay-off, slow-downs, absenteeism and work stoppages. Greater flexibility within and between organizations also opens up the job market to more women, older individuals, and the physically and socially handicapped. Contrary to conventional wisdom, we might ask whetner stability in the labor market can be fostered through allowing more people to work for more than one employer.

It is not unreasonable to expect that increasing regulation of productive enterprise and work activity will be accompanied by comparable increases in control of non-work or lesiure time activities. For example, a potential increase in the quality of life due to workers being able to work on a greater variety of schedules of hours in the day, days in the week, or months in the year, may not materialize if schedules of mass transportation are not changed accordingly. The complexities involved in coordinating the schedules of factories, stores, churches, schools, public services, and so forth, must be dealt with. And, the opportunities provided to learn how to use free time more satisfactorily must keep pace.

Policy must incorporate a longitudinal perspective. Thus, for example, it is possible that in the future individuals may vie to become "workers," not because they need more money, but because the job routines having become fully automated, the people who are workers will be the relatively few who have a chance to do stimulating things that are not pre-programmed. The "leisure class" with time on their hands may then be at the lower end of the social scale. With mounting security and affluence, there may be a decline in the incentive value of consumer goods. "Is it worth it?" may be a more prevailing attitude among those who "never had it so good," as the behavior of young people gives mounting evidence.

In summary, increasing flexibility of working time carries with it complexities which can only be dealt with by formulating policies which regard free time and working time in a wholistic context. Again, the dividends of greater flexibility may only accrue if the increased complexity involved is dealt with by long-term planning and coordination of all parties concerned and in all sectors of society. If adequate policies are not adopted to deal with these problems, then the potential benefits of greater flexibility, to enrich life for the individual and society at large, may never be realized.

The further we have pursued our explorations here, the more it has become evident that the production curve for questions is climbing more rapidly than the production curve for conclusions. The gaps between the two are large. All of which points to the need to conduct research and experimentation to close the formidable gaps in our facts and our understanding. We have sought to point out where there are such gaps and to provide some examples of research to fill them.

Chapter I

ORIENTATION AND OBJECTIVES

Background of the Project

Many features of work scheduling derive from historical customs and are rooted in conditions that are changing or no longer exist. The values attached to work and leisure are also being altered as our life styles undergo a metamorphosis. How to optimize the expenditure of people's energy and purpose in productive and satisfying pursuits, on and off the job, is worthy of analysis within newly emerging contexts. It would be well to know more about how different patterns of distribution and utilization of hours of work and free time can affect the level of performance and the goals achieved by individuals, and by the organizations and the society of which they are a part. Research is needed to develop new knowledge and improved theory of work and leisure at a time when people are seeking new sources of satisfaction and the boundaries within which work can be scheduled are becoming increasingly flexible. Current managerial experiments with revised work weeks and more flexible work schedules indicate the timeliness of more systematic scrutiny.

During the past three years, with increasing frequency and prominence, public attention has been called to a variety of experiments by various organizations with non-conventional scheduling of the work week. So that within one not atypical week, newspaper and magazine articles reported that government and business units which have departed from the five-day, 40-hour week included a district of the District of Columbia Police Department which employs overlapping 10-hour shifts; an advertising agency that now closes shop on Friday; and Lufthansa's "gliding work-time" with self-selected arrival and departure times within a 12-hour day.

To be sure, there are many groups for whom work schedules have been patterned on some schedule other than the five-day week to which most of our urban life is clocked. For instance, drivers of fuel oil and gasoline delivery trucks for most major oil companies have been on four-day scheduling for 30 years (Mortimer, 1971, p. 5). There is also quite a bit published on effects of length of work period on production and satisfaction. It has not been until recently, however, that so much serious talk has surfaced, accompanied by an appreciable amount of action, about providing alternatives to the prevailing mode.

The relatively sudden surge of interest in these issues is illustrated by Figure 1 from a recent American Management Association report. This exhibit

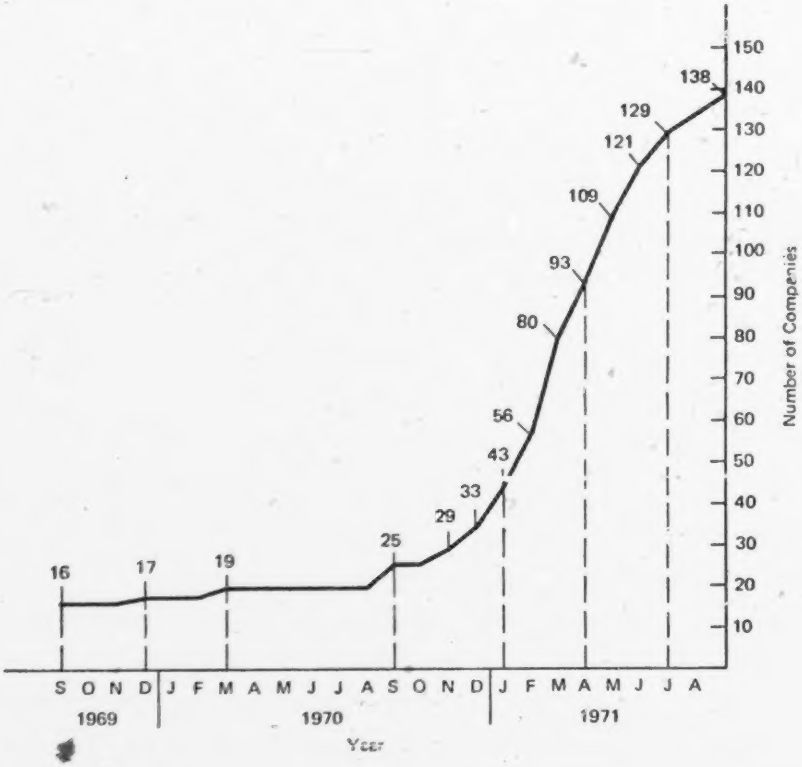

Figure 1. Rate of conversion to four-day week since September 1969 reported by 138 four-day companies. (From Kenneth E. Wheeler, Richard Gurman & Dale Tarnowieski. The four day week. American Management Association, Inc., 1972, p. 8).

is based upon 138 cases from a survey of 143 companies which had instituted a four-day work week. As of the middle of 1971, Newsweek (August 23, 1971) reported that over 500 firms in the U. S. were using the four-day week or some other variant. By November of 1972, according to further data provided to the Society for Humanistic Management, Kenneth Wheeler, who has been studying these developments continuously, claimed there were 2,000 companies that had adopted the four-day week. Though the number of people affected is still small--one out of 840 workers, Wheeler estimates--the accelerated rate of involvements, including components of some of the larger U.S. corporations, suggests that the five-day work standard is no longer sacrosanct, and that experimentation with this and other new patterns of working time is more than a transient phenomenon. Not to be overlooked, in the same context, is the Federal law that in 1971 put five, four-day weeks into the calendar by decreeing that five of our legal holidays should always occur on Monday.

In Europe, a companion trend has taken a somewhat different form, to which the label "flexi-time" has been applied. Lufthansa's "gliding work time," previously mentioned, falls in this category. An employee is given considerable latitude in how he puts together time on a daily basis to meet the standard weekly total requirement. For example, the firm's work day may be 12 hours long, and an employee's arrival and departure may take place anywhere within three-hour periods at the beginning and end of the work day. This allows for different arrival, departure and total times on each day, and may include carry-over of time debits from week to week.

It is difficult to pinpoint causes for the marked increase of interest in these kinds of experiments. But it seems reasonably certain from remarks made in management and labor ranks that underlying most of these is an effort to counter what are seen as critical conditions in absenteeism, declining productivity, turnover, work stoppages, and other indications of dissatisfaction and poor motivation in the world of work. Seashore and Barnowe's (1971) nationwide sampling in late 1969, as part of the Department of Labor sponsored "Survey of Working Conditions," found a growing malaise in all segments of the work force that crossed occupational types, income levels, ages, sexes, and races. "Blue collar blues" and "white collar woes" go hand in hand. An additional factor contributing to such innovations is represented by situations where there are shortages of qualified personnel and employers hold up the new patterns of working time as an attraction. Currently, unemployment levels make this condition more likely to be found in Western Europe than in the United States. The increasing generality of interest in these kinds of developments is also manifested in the sponsorship by the Organization for Econcomic Cooperation and Development (OECD) of an International Conference on New Patterns for Working Time in Paris in September of 1972.

A host of questions have yet to be given attention and evaluation by economists, behavioral scientists and experts in the other fields.

What are some ways in which the business firm may benefit or experience difficulties as a result of changes in work schedules? How do conditions and kind of work interact in development of appropriate work schedules? How do various individuals and groups perceive their vital interests and relative influence to be affected? What impacts portend for industry, labor, government, and the economy?

These are a sample of questions for society as a whole that should be examined while alternatives and options are still open.

Improved understanding of the influences shaping work schedules and of the impact of changing schedules upon work and the labor force relate quite directly to concerns with manpower resources and requirements; technological change; employment and unemployment; personnel development, utilization and availability; and job matching in the labor market. Research to keep abreast and ahead of emerging trends in the scheduling of work is therefore essential to the development of informed and responsible manpower policies and programs.

The study of changing patterns of work can be regarded as an investigation of the impact of a new technology upon values. That is, a flexible work schedule or a shorter work week, as it becomes a more typical pattern, assumes the status of a technological development (Samuelson 1970, p. 7). As with any major technological change, alterations may be expected in value systems. It behooves us to become more sophisticated in anticipating how these altered values, in turn, will be reflected in labor laws and contracts, family life, trade union philosophy and tactics, political orientations, employment stability and mobility, economic theory, educational philosophy and other aspects of the social system.

For these reasons, it seemed timely to embark upon this study of the organization of the work week, to range from the basic conditions for determining feasible alternative schedules of work, to the various kinds and degrees of impact they can have upon human performance, social processes and organization, and the quality of life.

Objectives

It was our ultimate aim in this study to make information available that could be drawn upon in the formulation of effective public policy and in the making of appropriate decisions by individual organizations.

Three specific operational objectives were derived from the foregoing.

The first was to accumulate currently available information and experience associated with innovative administrative experiments in work scheduling that might be helpful in forecasting (somewhat speculatively, as befits anticipation of uncertain futures) the larger consequences of such changes. It was planned that particular attention would be given to social and psychological adjustments involving alteration of people's life styles, psychological effects, family roles and functions, changes in psychological and economic needs, and the like. In developing insights and implications we would seek to take into account foreseeable influences of business, labor, government, law and other components of society and culture.

In the beginning, stimulated by the four-day work week experiments, then being publicized, our attention tended to center primarily on variations in the work week and the potential outcomes of implementing alternatives to the eight-hour day and five-day week. This continues to be an important aspect of our study. However, as we became more fully immersed in the subject matter, it became obvious that to make the related information and issues more meaningful our sights needed to be adjusted to encompass more of the larger systems context dealing with flexibility of working life as a whole, of which experiments with the four-day week are but one indication these days. That revised orientation we have attempted to assimilate in this report.

As a second operational objective, we planned--given the current state of knowledge--to explore implications for decision-making, policy and practice that might provide insights and offer some guidance to individuals, organizations, and political and social institutions involved, in anticipating and making ready for the changes foreseen.

Finally, we expected to provide recommendations for such programs of research as might be indicated to fill the more significant gaps in relevant areas.

Our orientation first and predominantly will be centered on the problems and adjustments of the individual. We will consider what these problems and adjustments signify for business organizations on the one hand, and labor organizations on the other hand. Superordinate to the interactions of the parties most directly involved there is, of course, the role of governmental and social institutions and their policies that must be taken into account.

Among the principal applications of the larger area of study, into which our project fits, can be included the development of policies and programs to:

1. increase individuals' ability to update skills and knowledge in step with technological change by mixing work and study;

2. make better use of time, space, and facilities through reallocations of daily, weekly, monthly and yearly periods of work and nonwork activity; reducing congestion and overloading at peak periods and underutilization at other times;

3. offset labor-market fluctuations through encouraging or discouraging education and other kinds of nonwork activities in order to accommodate supply of labor to variations in demand, and

4. increase personnel satisfaction and well-being by providing more opportunities for individual choice in work and in other life activities.

The magnitude and complexity of the issues involved can lead to endless discussion. Some constraints must be imposed. Hence, we will attempt to be guided by certain organizing principles: (1) we will concentrate upon the phase of life in which people are primarily members of the labor force (though relating to both the earlier preparatory stages and the later retirement stages to present the total developmental picture); (2) while we will draw upon history for perspective, we will devote most attention to looking ahead to the emerging post-industrial era; (3) while we will draw upon experience and thinking in other countries, our focus will be upon the U.S. scene for the most part; (4) prescriptions for solutions will be strictly subordinated to the attempt throughout to generate creative questions and probing to reveal the need for knowledge, theory and research--hoping thereby to stimulate more concerted systematic interest in the development of policy and the supporting programmatic research that is now lacking.

Chapter II

LABOR-LEISURE TRENDS

A basic premise governs most analyses and interpretations of data on working time including those made in this report. It is that industrialization in the future, as in the past, that will be characterized by progressive improvement in per capita productivity. And it is this increase in productivity that continues to make possible more real income and free time for the individual.

In a recent manuscript, Archibald A. Evans (1971), consultant to OECD, urged consideration of measures that would make it easier for individuals to choose between more real income and more time off work, and to choose the form that the time off may take and the uses to which it can be put. We will engage this frame of reference in our discussions.

Concepts of Free Time and Flexibility

Before we start talking about some trends in labor and leisure related to these matters, a few definitional statements are in order. Though we will continue to follow common practice in using "leisure" and "free time" more or less interchangeably in discourse, the term "leisure" is burdened by more subjective connotations, and so we prefer to use the more objective term, "free time" when clearer specificity is called for.

Free time is used here to mean the time that a person can allocate at his discretion among various activities, based upon the relative values and priorities that he assigns. In this he is guided by his own appraisal of needs, and the potential for their satisfaction he believes to exist in the various alternatives of which he is aware, and that are within the resources and range of opportunities available to him. In the broad sense, this is time that is "earned" in the course of paid employment. It takes the form of regularly scheduled "days off" (usually weekly) and time out side of working hours on regular working days; holidays and vacations; and retirement. (Unrequited unemployment is not included in this definition of free time; nor is time lost through sickness and disability).

Free time is not simply total time during the working and retirement years minus the number of hours spent in paid work on the job. Different schedules of work provide different amounts of net usable, individually disposal time, or make for greater or lesser efficiency in use of such time. Thus, larger chunks of free time generally offer the individual more options in disposing of the time. Fewer days of work can cut the gross time and costs of transportation to and from work--unless they encourage a person to move into more appealing environments further removed from centers of employment. It should be noted also that all time is not created equal. The value assigned to a period of time is weighted by the psychological satisfaction derived by one's activity in that period. De Grazia (1962, p. 142) thus makes the point vividly that time is not simply " a moving belt of equal units," and that "a moment of awe in religious experience or ecstasy in love, or orgasm in intercourse, a decisive blow to an enemy, relief in a sneeze, or death in a fall" is not equal to "a moment of riding on a bus, shovelling coal, or eating beans."

Other examples can be provided, of course, to make the point that careful analysis needs to be applied to ascertain how much net disposable free time for individuals is increased--or decreased--and what are the degrees of freedom in disposing of that time, when organizations reduce or alter their work schedules.

Two major options exist for the use of free time--non-paid activity or additional employemnt to increase income. The non-paid activities include: maintenance activity--such as rest, health, shopping, family and home care, transportation, and citizenship duties; recreational activity--such as sports, entertainment, social and cultural activities, reading, radio listening, television watching, and interpersonal relations with friends and family members; and educational activity--learning for self satisfaction and social utility, as well as for improvement of one's occupational opportunities.

At present levels of income, a substantial proportion of workers show a preference for more income over leisure. They have not yet reached the standard of living to which they aspire. They are not yet ready to stop working in order to "enjoy life" at the level that they have currently attained. And there are, of course, still substantial numbers in our population living at less-than-subsistence level for whom there is no choice.

The division between paid work activity and non-work activity is somewhat arbitrary, since, in fact, there may be considerable overlap in the purposes of the two. For instance, the worker may be the beneficiary of training and education supported in whole or part (i.e., paid) by employer or government as investments in human capital. The support aims to improve the present or future quality of job performance, opportunity for advancement, or people's performance of other functions considered to be a value to self and society. Or, the man or woman may invest his or her own time and capital for much the same purposes.

The term "flexibility," is used in the present context to represent the range and variety of options and patterns available in the allocation of time to employment, education and training, leisure, rest and retirement. Against a time dimension, flexibility may be viewed cross-sectionally in terms of the activity mix on patterns existing at some given point, or longitudinally in terms of composition and change over some span of time. In the more-or-less conventional sense, in which work time is thought of as being quite rigidly programmed, reduction in working time has been associated with increased overall flexibility, with more options and discretion coming within reach of the individual as more free time is placed at his disposal. However, the definitions of work activities are in process of change and the latitude in scheduling time and content of work has been expanding. Consequently, it can no longer be said with validity that flexibility is primarily a concommitant of increased free time.

Declining Work Time; Increasing Free Time

Statistics are not hard to find on trends in the allocation of time to work and non-work activities. The patterns in all industrial societies are consistent. Measured in hours per week, or years in a life time, the proportion of an individual's time devoted to paid employment consistently declines. Years of formal schooling increase. Entrance to the work force starts later. Hours in the work week decrease. The number of holidays and duration of vacations keeps going up. Retirement starts earlier. And, while curves based upon various assumptions may differ, the future extrapolation all point to continuing movements in the same direction. A few illustrations will be provided here.

Denis F. Johnston (1972, p. 4) provides data (Table 1) showing the change since 1900 in expectations of an average 20-year-old workingman in the U.S., reflecting the declining proportion of life spent in the work force (or about 18,000 hours during a lifetime).

TABLE 1

Changes in Expectations of an Average
20-Year-Old Working Man in the U.S.

	1900	1950	1968
Life expectancy (yrs. remaining)	42.2	48.9	49.2
Work life expectancy (years)	39.4	43.1	41.5
Retirement expectancy (years)	2.8	5.8	7.7
Percent of life in retirement	6.6%	11.9%	15.6%

Also worthy of particular note is the change in recent years in the education this average man brings to work. Table 2, from the Current Population Survey of the U. S. Bureau of the Census shows that the typical American young man now (March 1972) has completed almost a year of college; almost two and one-half years more than his father did (in 1940). If he is non-white, the increase from 1940 to 1972 is more than twice that (5.4 years) as he approaches parity with the majority (12.4 versus 12.7 years).

Table 2

Median Years of School Completed for Persons
25-29 Years of Age, by Color, 1940-1972

Year	Total	White	Non-white
1940	10.3	10.7	7.0
1950	12.1	12.2	8.7
1960	12.3	12.3	10.8
1972*	12.7	12.7	12.4

*March

Moore and Hedges (1971) provide a number of other useful indices of trends in labor and leisure. Perhaps the best long-term indicator is the average weekly hours per worker in the civilian economy. Extracts from data they provide have been used to develop Figure 2, which shows a decline since the turn of the century from above 53 hours to below 40 hours today, with some reduction in the rate of decline after World War II.

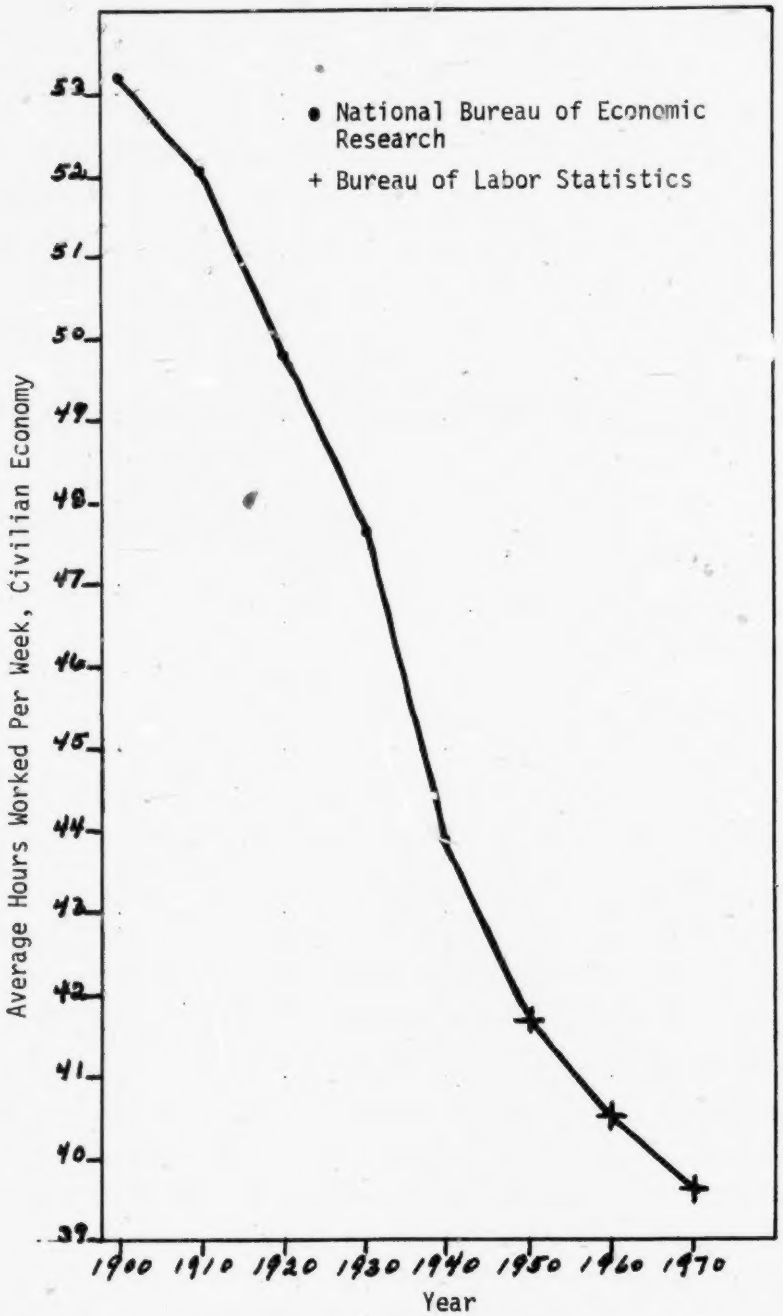

Figure 2. Average weekly hours per civilian worker.

However, paid vacations, holidays and other forms of free-time benefits, have, since the war, assumed far greater relative importance than before. More than two-thirds of all workers in the private sector economy now get paid vacations. From 1960 to 1969 alone, worker vacations increased from 1.3 to 1.7 weeks for all workers; 1.8 to 2.2 weeks for full-time workers. Furthermore, from 1959 to 1968 on the average, holidays increased three-tenths of a day for office workers (to 8 days) and seven-tenths (to 7.5 days) for plant workers.

A summary of the average gains in free time over the past decade and century is given in Table 3.

Table 3

Work Time Reductions for Past Decade and Century

	Free Time Hours Gain/Year	
	In Century	In Decade 1960-69
Work week reduced	675	30
Vacations increased	70	15
Holidays increased	45	4
	790	49

When these figures are added to the increased amount of non-working time in youth and old age, such as reflected in Table 1, Moore and Hedges put the lifetime gain for all workers in the past hundred years at about 50,000 hours free of work.

They further note that the reduction in hours worked in the '60's accounts for only a small fraction of the gain in productivity that the economy achieved during that period. The reduction of about 50 hours in work time amounted to only about 8% of the equivalent of 650 hours (at the 1960 productivity level), made available by the nation's increased productivity.

When the 3% average annual productivity gains of the past 20 years are projected ahead, the potential range for collective choice of increased leisure and/or increased income becomes quite impressive. The work week would be 29 hours in 1980, if the expected output gain were taken entirely as free time. Past history indicates such a division between shorter work time and higher real income is not very likely. Nonetheless, we do see that there exists a real potential for substantial change that could come about, if some marked changes in value systems were to become part of new social and economic policies.

In this regard, Dr. Juanita Kreps (Kreps and Spangler, 1966, pp. 363-365), provides some illustrations. If we suppose that the division of productivity gains will be the same in the remainder of this century as in the first half--two thirds in increased goods and one-third in time free of work--then the growth in free time would be sufficient to make goals such as these attainable. By 1980, a 2.5 hour decline in the work week could be realized. Between 1980 and 1985, society could exercise a choice to retrain about 4%of the labor force each year or add about 1.5 weeks to annual vacation time. By 1985, the choice could be between retraining almost 7% or providing an additional three weeks of vacation. Other combinations and choices are possible, of course.

Other data give us some clues to the personal and situational variables that can influence individual and collective choice of time utilization options, and they induce restraint upon the sweep of generalizations that can be made.

In general, younger workers, older workers, and married women seem to prefer shorter hours to additional income. Most part-time workers who do not want full-time work are in these groups. Men in the prime working years and married are more likely to chose income over leisure. And overall increases in leisure time are not shared proportionately by executives, proprietors, professional workers and farm workers.

Nor should we overlook housewives. It is noteworthy that while working women spend about half as much time on housework as do housewives, and the proportion of women working continues to increase, there are indications that the women who do stay at home are actually now spending more time at home management chores than their mothers did. Though "productivity" in food preparation and ironing has improved significantly--time requirements being decreased by prepared foods and no-iron fabrics--time spent in shopping, in travel (e.g., associated with household errands and chauffering children) and in home maintenance (including the care and repair of "labor-saving" appliances) has also risen significantly (Robinson and Converse, 1972, pp. 45-51).

In a more affluent society there are a lot more "things" to take care of at home, for full-time and part-time housewives, and for the men who live there too. These priority claims on "non-working" hours can cut into the time and choices that are "free."

Some reductions in scheduled hours obviously have been bargains struck to increase overtime earnings rather than free time. Thus, the straight time work week reduction in manufacturing from 37.6 to 37.1 hours, between 1956 and 1968, was more than offset by a rise in overtime from 2.8 to 3.6 hours.

When only full-time workers are tallied, the averages appreciably exceed the 40-hour standard. So that, for example, the 1970 average of 39.6 hours in Figure 2, becomes 45.1 hours for full-time workers when such increments as overtime and moonlighting are added. For full-time workers the change in scheduled hours was only 0.7 hours in 10 years. Overtime is estimated by BLS to involve more than three times as many people as moonlighting.

Extrapolating into the 70's, Moore and Hedges see overall reductions in actual hours engaged in paid employment as being quite small, while attention centers upon reshuffling of free time to provide larger blocks of leisure.

Chapter III

EXPERIENCES WITH NEW PATTERNS OF WORK TIME

It is the larger blocks of leisure that provide the natural foundation for experiments with compacted work weeks and with flexible work scheduling that have come into recent prominence. In this chapter we will initiate consideration of the critical issues and influences involved in these innovations as part of the larger context of changes in work and free time, life style and quality, that lie ahead of us. We will explore several of the possible arrangements of work time, findings of research and evaluation on new time patterns, and we will detail some company experiences.

Arrangements of Working Time

Bolton (1971) summarizes different kinds of work week or work hour arrangements, a few of which are not widely known in the United States, as follows:

1. Fixed working time. Under this system there is a fixed starting and a fixed stopping time each day. Each employee must be at his work place at the appointed hour and much store is put on punctuality. Individuals are rarely allowed to start and finish at times different from those set for other workers. Time clocks, attendance registers or personal observation by supervisors control punctuality, and deductions may be made from the paychecks of workers who are late. The five-day, 40 hour week is the prevailing mode in the U. S. Three other forms are described below.

a. Compact work week. This is best illustrated by the 4-day, 40-hour week. Mostly instituted by management, this arrangement, it has been said, leads to reduced absenteeism and turnover and increased production because employees know they will have a long weekend and fewer days to work, which more than compensates motivationally for the discomfort and inconveniences of a longer work day. Although 4/40 is the general term used for discussion purposes, some companies' arrangements include a reduced work time of 38, 37 1/2, 36,or in a few instances, 32 hours a week. There are also three-day, 36 or 39 hour week arrangements mostly used by insurance companies in their computer operations for better equipment utilization.

b. Shift work. Shift work used to belong, by and large, to the world of the production worker; the advent of the computer has introduced it to the white collar worker. Shift work is a system of fixed working hours with predetermined starting and finishing times. The flexibility it provides is primarily to the employer's benefit. It enables management to make better use of the capital equipment facilities employed, and to increase capacity by this better organization of plant and human resources. There is no real advantage to the employees--except perhaps a monetary premium for working longer or more inconvenient shifts. The compact or reduced working week also can apply here.

c. Staggered working hours. In order to alleviate the discomfort of rush hour travelling, some offices use starting and finishing times which are staggered at 1/4 to 1/2 hour intervals. Employees are allocated, or allowed to choose, their starting time, and this "automatically" determines their finishing time. The employee has to work a constant number of hours each day, always between the same starting and finishing times.

2. Rational working hours. This system is based on the premise that it is uneconomic to staff departments for peak workloads which occur perhaps on one day of each month, or in one month of each year. Exceptions apart, it is often possible to predict levels of activity accurately, so contracts of employment provide for more hours to be worked in some periods than in others, or on some days rather than others. A contractually agreed maximum per month or year, must, of course, be observed.

3. Variable working hours. This concept gives each employee complete freedom in the choice of times he decides to work, subject to his responsibility for completing his contractual hours, and for ensuring that during "standard" working hours that are defined, there is a deputy available to carry out essential work in his absence.

4. Flexible working hours or "flexi-time." Each employee is allowed to start and finish his working day, within certain limits, when he or she pleases. A core time, X number of hours a day, must be worked by everyone. For the rest, the employee can decide for himself how he accumulates, within a given period, the total number of hours he has contracted to work. Outside of the core time, he can arrange his starting and finishing times to

suit his personal requirements. This stretches the overall working day of the organization by one or two hours in the morning and in the evening.

We would like to examine more closely two of these newer concepts currently receiving much publicity, paying particular attention to compacting the work week on a fixed schedule, and flexible work time. The former has had increasing popularity in the United States during the past few years, while the latter has been growing rapidly in use on the Continent, especially in Germany and Switzerland.

The Four-Day Week

Although much has been written about the four-day week, and many conferences and seminars held on its benefits and problems, there is little adequate data to guide us on its long term effects on workers. This is the first point which must be recognized in any discussion of alternate work forms.

The second major point is that few large companies have had any experience with a four-day week. Firms on such a schedule are generally small, employing less than 500 people, and are non-union. Even where the four-day week is in effect in large organizations, we find that, with only a few exceptions, it is in small departments where the total number of employees either experimenting with or regularly working on such a schedule does not exceed 500 to 600. Two such exceptions are United States Automobile Association with 3,000 employees on a four-day schedule, and Samsonite's furniture plant in Tennessee, also on a four-day schedule. (These firms will be examined in more detail later in the chapter.) What are the reasons for this?

For the most part, organized labor has been against it. Labor's position is best summed up in the words of Mr. Ruby Oswald (1971, p. 281), an economist with the Department of Research, AFL-CIO, "Organized labor has been the pioneer and the driving force in the reduction of working hours. We support the shorter workweek and shorter workday. We support labor-management efforts to re-schedule working hours, through collective bargaining. But we are adamantly opposed to stretching out the workday and nullifying the 8-hour standard."

The "8-hour standard" which Mr. Oswald lauds is buttressed by Federal and State laws which call for time and one-half pay for work in excess of 8 hours a day and/or 40 hours a week. It would take an act of Congress to change the Walsh-Healey Public Contracts Act of 1936 which covers employment conditions for firms with government contracts in excess of $10,000 by limiting the hours of work to eight in one day unless overtime is paid. Hearings held by the Department of Labor (1971) to consider waiving the eight-hour limit, resulted in the decision not to change overtime regulations (U.S. Department of Labor, 1972). Most submissions advocating changes in the overtime regulations came from generally small private firms, employer associations and management consultants. Opposition to a change in regulations came mostly from labor unions. Although the Contract Work Hours and Safety Standards Act which applies to construction contracts can be waived by the Department of Labor on a showing that it is necessary and proper in the public interest to prevent injustice or undue hardship or to avoid serious impairment of the conduct of Government business, the Labor Department feels that it is undesirable to waive one act and not the other. Many states have laws which restrict the daily hours of women and minors, but some of these laws are being challenged by Title VII of the Civil Rights Act of 1964.

Many large companies have not tried work arrangements other than a five-day, 40 hour week because of scheduling problems. This might best be illustrated by talks between Chrysler Corporation and the United Auto Workers Union (one of the few unions not against the 4/40).

In a joint study undertaken in 1971, some of the logistic problems associated with a shift to a four-day week in a mass production industry (which ultimately led to the determination by the Chrysler Corporation management that implementation at present was unfeasible) came out quite clearly.

Thus, for example, the transportation flow of parts from the supplier is scheduled to closely integrate with assembly line operation (in effect, the assembly line may be thought of as extending to the highways and railways). Hence, a reduction in the number of days of plant operation, even if the total number of hours remained unchanged, would require a large investment in construction of stockpiling facilities according to Chrysler. The union did not agree, saying that plants are already working different schedules, but it has not been inclined to press the issue, perhaps because it is assumed that the issue will be rendered moot before too long, as the work week moves toward a 32 hour average (thus making a 4/32 week an operational alternative).

Another aspect of the problem was that if two shifts of 10 hours were put together, with an hour between shifts for change of personnel (parking lots also need to be emptied and refilled between shifts), the down time left during which maintenance activities are carried out would be reduced from seven hours to an insufficient three.

The effects of fatigue from a 10-hour day on a four-day schedule are not really known since studies conducted on fatigue have always been based on a five-day week. Some companies use the four-day to gain overtime to be worked on the fifth week day. This practice gives weight to consideration of the dangers of fatigue.

Many of the current work standards were established in the 1940's. Since then, technical advances have made considerably decreasing physical burdens on the worker. There is a need to review standards in light of present conditions--and here we would include the mental and emotional consequences of the four-day week. Many of the problems associated with fatigue depend on the kind of work performed. Where there are high physical and mental demands, it may not be appropriate. An experiment on a four-day schedule at Heath Techna Corporation in Kent, Washington, was terminated because it proved too tiring during warm weather according to the International Association of Machinists. Yet another version of the compact work week seems to work quite well with computer operators. For a broader discussion on the physiological and psychological factors affected by working time, see Chapter V.

The Metropolitan Life Insurance Company has had their computer operations staff on a three-day, 12 1/2 hour week since May of 1970. People are permanently assigned to one shift or the other. They found it best to keep most of the married people on the day shift which runs 7:30 A.M. to 8:00 P.M., and most of the single people on the night shift, which runs from 7:30 P.M. to 8:00 A.M. This system seems to have a positive effect on turnover and absenteeism. Instead of working 3 days straight, they work 2 consecutive days, break for 1 day, then work 1 day. Of the 500 employees originally in this department, only 7 dropped out when the plan went into effect. The problems involved in this arrangement are mainly rescheduling work when someone is sick, and taking more time to complete projects than before the change. It is thought that this may be due to splitting up the work time into two days and one day (Neitlich, 1972). This may or may not be true. Until systematic studies are conducted or comparisons made of two types of operations one like the above and one with a straight three-day week (if there is one), it is difficult to reach a firm conclusion about whether or not fatigue is a contributing factor.

Experiential data. We will now examine some general reports on the effects of compacting work weeks, and then examine some case histories to point up the variety which exists and more of the benefits and problems involved.

The first survey of companies on the four-day week was conducted by James Steele and Riva Poor (1970). Out of the 27 companies which they originally found to be working on some version of a compact work week, 13 were included for in-depth study. Since the 13 companies used in the study are not identified, and 27 are identified in the index, there are some questions about just what kinds of situations are represented. Another problem with the sample is that the possible variations in work weeks makes it difficult to evaluate the in-depth study. For example, some firms have reduced the number of hours of work but expect workers to work their extra day off as overtime if needed; other firms only use a four-day week on a certain shift. Still others, effect schedule changes only at certain times of the year, like McDonald's Corporation which switches from a five-day week to four and one-half days during the summer only; or Reader's Digest where the normal work week is 5/35, except in May when they work a 4/28 schedule. Also, some of the firms had discontinued the four-day week at the time the survey was conducted (Poor, 1970, p. 106).

The authors did not state which companies were included in the study and since variations are so great, comparisons and summaries are not too meaningful. However, with a strong note of caution, the main results of Steele and Poor are given here as matters of interest.

Of 700 questionnaires sent to the companies, only 168 were received in time to be included in the study. Their findings indicated that workers liked their companies more than they had before, or at least no less than they did before converting to the four-day week. Out of a group of 141 workers, 87 cited no disadvantages when asked to compare advantages and disadvantages of the four-day; 46 workers cited both advantages and disadvantages, and eight cited no advantages. When asked about moonlighting, 17% of the sample indicated that they did; a relatively high proportion when compared to about 5% to 10% reported in other studies. However, they classified extra shift work as moonlighting. Some companies encourage or require overtime ranging as high as 20 hours a week. Also included were work in one's own business (especially farms) and second jobs. Wheeler (1972) claims in his follow-up of over 100 companies which he had assisted in converting to four-day schedules, that the moonlighting rate drops back to 10% after the new schedule had been in effect for awhile.

Of the new workers surveyed as to whether they joined a firm because it was on a four-day week, a little more than three out of four workers said it was an important reason, and three out of four managers also said it was an important reason for their joining the firm. Managers also reported that the attitude of workers towards their work was better than before the new schedule. Scheduling problems loomed largest in managers' reports on the new work week.

One hundred companies on a four-day schedule were solicited to participate in a survey conducted by James A. Wilson (1971). Fifty-four companies complied and distributed 1400 questionnaires, of which 633 were useable and coded (a return rate of 25% of the total mailed or 45% of those distributed).

To summarize the results of the survey, Wilson says:

> We found that about three-fourths of the employees currently on a rearranged work week were in favor of the schedule. They enjoyed their work more, were no more tired and felt that few personal or job-related problems had been created by the new schedule. Some spent more money on leisure activities* and others indicated a willingness to work more days or hours at a stretch. For a small number of employees, the schedule was viewed very unfavorably (less than 10 percent). These persons were less happy with their work, were more tired and wanted to resume a five-day eight-hour schedule. (Some few companies are allowing such dissatisfied employees to resume the traditional schedule on their own without apparent problems to the organization.)

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*Mostly unmarried.

Additional analysis was performed in an attempt to find the underlying causes and trends in the whole sample. The factors thought to influence attitudes included: sex of the subject, marital status, age, occupational classification, combined sex and marital status, type of company, region where company is located, and whether the company is unionized. "The general findings of this additional analysis were: no single factor adequately explains why or which people like the rearranged schedule and those few persons who dislike the new schedule are similarly varied on most factors." As in the Steele and Poor survey, no information is included as to how long each company was on a four-day schedule, or how the schedules operated.

Other questions that come to mind about studies that have been attempted to evaluate the four-day week are: What are the different types of benefits at these companies and how were they changed (if they were) when the new schedule went into effect? What other types of changes were made besides changing the schedule of work? What has been done about pay rates; do they cover time-and-a-half over eight hours or is the base rate revised so that the paycheck remains the same before and after the change? Also, are all of the people in each company on a four-day schedule or only some of them; and how does this affect employee attitudes? What about married couples who work different schedules; how does this affect them? These are only a few of the many questions.

Wheeler, et al., (1972) studied 811 companies for the American Management Association, of which 140 were on some type of four-day plan. He compared opinions of company executives on the four-day week to those on a five-day week and found that they differed almost 180 degrees in their conclusions. For example, 84% of the companies not on the four-day or not considering it, believed that the shortened work week would be harmful to business results. Among the four-day companies, 80% said that business results will improve. The four-day week does increase scheduling problems, but they said that this is made up for by the increase in productivity. Only 3% of the four-day companies said that they had a decline in productivity. Of the companies on a four-day plan, most companies mentioned that one of their objectives in adopting the schedule was to provide an additional employee benefit. However, in 69% of the cases, the objectives were centered on business results, and only 31% were employee oriented. Of those respondents on the four-day, 25% of the executives were also on the four-day. Fifty-eight percent said there was "no change for executives." This may present problems in the coming years as the executive force gets younger and perhaps more leisure-oriented. It is interesting to note that the 140 companies have 23 different types of schedules among them. By far the most popular is the 4/40, but they range from 3/34.5 to 4.5/40. This, of course, does not include other arrangements like a 7/70 with one week on, one week off, as is worked by laboratory employees at the Latter-Day Saints Hospital in Salt Lake City, or 6/36 as worked by rubber workers in Akron, Ohio for over 30 years.

In a follow-up of over 100 companies that he assisted in converting to the four-day week, Wheeler (1972) states that productivity rose 5% across the board. Generally, the companies cut out 20% of the coffee breaks and start-up and shut-down time by changing to a four-day schedule.

If methods like work simplication are applied without giving the workers an added benefit, productivity may go up but it would not be as palatable without something for the worker. Wheeler feels that the four-day work week offers the extra benefit to the worker. He claims that companies which have used the four-day and other management tools to increase productivity, the gains can be as high as 20%. Hedges (1972) notes that the productivity effects of the four-day week are hard to measure because of the other changes instituted at the same time.

In an attempt to find out how people perceive the effects of the four-day week over time, a longitudinal study of a pharmaceutical company in St. Louis was conducted by Walter R. Nord and Robert Costigan (1973).* The plant is medium-sized, non-union, employing approximately 100 males and 100 females whose average age is in the late 40's. Surveys were conducted three times: the first, six weeks after the trial period began; the second, one and one-half months later,and the third, one year from the start of the trial period. Management described the people as a close-knit group, and many of the workers are related to each other. Only foremen, group leaders and lower level employees, who worked in the plant at least 10 of the 12 months covered by the survey, and who were working there at the time of the first and third surveys were included in the analysis. The questionnaire returns from each survey were: first--131, second--126, and third--111. Only 59 respondents completed all three questionnaires, however, for most analyses each survey group was shown separately to indicate changes over time.

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*This is the only longitudinal study with substantial data that we have come upon so far, and is the most thoroughly analytic one available.

The researchers found that generally the overall attitudes were highly favorable to the four-day week. Over time, it was found that respondents who were less satisfied with the four-day schedule were more likely: to be on low pace-imposed jobs (office, janitorial, maintenance and cafeteria personnel); have fewer plans for the weekend; have more recreational plans than task plans; and perceive changes in their jobs as having less merit as a means of achieving company goals. Older workers were more likely to have task-oriented plans for the weekend, and younger workers to have recreational plans. If children were living at home, respondents tended to see the four-day as having unfavorable consequences on home life. The proportion of negative changes on home life increased significantly over time, with females regarding the four-day effects on home life more favorably than males did.

The authors state that:

> A possible explanation for these findings is that females experience inter-role conflict between their job outside the home and their role of homemaker. Their new full day of leisure permits them to catch up on housework which the social norms of our society still require of women, even those who are employed outside the home. Their new leisure time is more structured and they feel better about their performance of one of their major social roles. Males, by contrast, have fewer tasks which are expected of them in their role at home. They make more recreational plans but do not feel the increment in satisfaction from a reduction in inter-role conflict that females might experience. If future research replicates these findings, and our sex roles do not change radically, it may well be that the four-day week will be of greater benefit for females than for males.

The Nord and Costigan study also showed a decrease in absenteeism of 10% which held up over time when one controlled for seasonal factors. Wheeler (1972) has reported that absenteeism has dropped in 80% of the companies which he has helped to convert to the four-day week, the most likely reasons, he says, being that workers have an extra day for personal chores and there is a loss of 25% in pay if they are out for one day.

Case studies. To show some of the variability in schedules, situations, and experiences where the compact work week is in effect, we now will present several brief case histories.

United Services Automobile Association (USAA). USAA first decided to try a 12 week experiment to see if the four-day week would be desirable as an employee benefit in October, 1971. The experiment started on November 15, 1971 and had to meet the following objectives (McDermott, 1972);

1. Service to members must not be diminished.
2. Individual productivity must be maintained at, or better than, the current level.
3. Any change in the work week must offer substantial benefit to both USAA and the majority of the employees.

The main concentration of USAA employees is in San Antonio, Texas. Ninety percent of their work force of 3,000 is on a Monday through Thursday work week of 9 1/2 hours with a 30 minute lunch break. About 200 employees work Tuesday through Friday. A regular five-day schedule is followed by 35 people, but they are not in the Texas office; 40 to 45 people are on a three-day, 12-hour schedule. They are the employees in Computer Operations and the building guards. As part of the work week change, vacations were also changed.

Previously, employees accrued eight days of vacation leave every 12 months. Now they accrue leave every six months after one year of service. Before, eight days of vacation amounted to 12 calendar days. After, the same eight vacation days gave 17 calendar days off. Holidays are no longer paid for. They have been traded for the shortened work week. Since most federal holidays now fall on Monday, employees work Tuesday through Friday of those weeks. USAA is seriously evaluating a plan to do away with federal holidays since many people complain about a four-day weekend, working four days, and then a two-day weekend.

These have been the results so far. Since USAA offices were open longer hours, the public could avail itself of their services 10 hours per day, five days a week. Direct inquiry from members increased 18% per week. The average turn-around time to return a policy to an applicant declined from 10.5 days to 6.8 days (a computer in the Underwriting Department contributed to this improvement significantly). The error ratio dropped from 7.2% to 6.1%. No complaint letters were received from members concerning the four-day week and total complaint letters fell. The individual productivity records went up from a base period of 99% to 102% for the total test, or 103% excluding the Thanksgiving, Christmas and New Year's holiday weeks. Sick leave for less than one day went down 12% (no base period record is given). Turnover decreased from 25% to around 18% (they had been working on this problem since 1969 when turnover was at the 45% level). Only two employees out of a work force of

3,000 left when the four-day was instituted. In an employee survey conducted after the four-day was in force, 96% thought that the new schedule was a good idea, 94% agreed that they liked their job more under the four-day, and 93% did not find the longer day too fatiguing.

One of the reasons for apparent success might be that the average age of USAA employees is about 25, and 80% are women. Also, the San Antonio area has a number of child care centers open from 7 A.M. to 6 P.M. which accomodates quite nicely to the company hours of 7:30 A.M. to 5:30 P.M.

Although USAA is the insurance company having the largest number of employees trying out the four-day week, other insurance companies have also been in the forefront of experimentation with three and four-day weeks.

John Hancock Mutual Life Insurance Company. Beginning in February 1972, 217 employees in four divisions were put on an experimental four-day, 35-hour work week. These were mostly low level clerical employees with some of their supervisors. As of October 1972, 420 employees were added to the experiment. The new group consists of generally higher level personnel including accountants, programmers and one department head. In April of 1973 an evaluation will be made of whether to convert their whole company to the four-day or keep the five-day week. The Boston office has about 6,000 employees. Although employees from the original group are highly in favor of the new schedule, so far the company has found it hard to prove an economic justification for changing all employees' schedules to a four-day week.

The experimental schedule is a 4/35 compared to the regular company schedule of a 5/37.5. Their day is from 8:15 A.M. to 5:30 P.M. with 30 minutes for lunch. The basic question underlying the compacted work week was what impact it would have on the amount of work accomplished by each division. To evaluate the experimental work week, three questionnaires were administered: the first, two weeks prior to the start of the new work week was used to measure the expectations of advantages and disadvantages; the second was administered three and a half weeks after employees had been on the new work week and compared these expectations with their actual attitudes; and the third questionnaire was administered the week after the experimental period had ended to measure over-all degree of change (employees were still on the new schedule at the time this questionnaire was administered). Measures of productivity were chosen separately for each division, and the results of the experiment both on productivity and other factors appear below (Janetos, 1972):

1. It is possible to maintain a comparable level of productivity on the 4/35 as on the 5/37.5.
2. Having an extra day off did not decrease the frequency of miscellaneous unpaid absences.
3. Even though employees reported that they liked the four-day, it did not decrease terminations.
4. Fatigue did not seem to present a problem.
5. Employees generally liked the new schedule and the day they have off. The majority of workers would rather work longer hours for four days than work five days.
6. Most employees said that the new work schedule did not interfere with their home duties.
7. Most employees said they did not spend more money on their day off.
8. Almost half of the employees reported that it was easier to get to work and there was a slight upward trend to this response at the end of the experimental period.
9. Employees did not find their jobs more interesting because of the new work week.

Further operational decisions will depend upon the results from the expanded experimental group.

An interesting collateral note in the John Hancock experience is that the initial experimental phase was announced in advance to be a temporary change of schedule of only three months duration, with further decisions then to be based upon evaluation of findings. It became obvious, however, that attempts to revert to the status quo ante would be replete with another set of problems in reorienting employees attitudes and work schedules and habits, whatever management's opinions on "objective indices" might indicate. Obviously, it is not a simple matter to turn work patterns on and off, and companies should therefore not lightly contemplate the consequences of "successful" experiments.

Samsonite Corporation. Samsonite's furniture manufacturing plant in Murfreesboro, Tennessee, initially tried the four-day week in November of 1970. Three months after they were on it, the union went on strike when their contract expired (not because of the four-day). There are 1,000 employees at this plant and everyone from the plant manager to the janitors is on the four-day schedule. Because of the strike, they were not able to go back on the four-day until September 1971, since it took the intervening time to fill the back orders. Part of the problem with the Samsonite experience is that they work a lot of overtime so that there has been an increase in absenteeism, turnover (which initially had gone down), and an increase in scrap or rejects. Their main reason for deciding to try the four-day was to be able to chose better quality applicants, which to some extent they have succeeded in doing.

The plant works on two shifts, one from 7 A.M. to 5 P.M., and the other from 5 P.M. to 3 A.M. Each shift has a half-hour lunch and two, 10-minute coffee breaks. They are paid for 41 hours of work, even though the schedule is 38 hours actually on the job. Employees were allowed to decide which shift they wanted. Everyone has Friday off. Of the 1,000 employees, 40% are women and 60% are men. Employees report that they are more tired now than before, but they will not give up the four-day schedule. In addition to the above variables, the officials of Samsonite are also closely following the accident record of the workers and report that it did go down a little in the first three months of the new schedule. Management is continuing to review the possible applications of various forms of flexible working time at this plant and at other locations.

Equitable Life Assurance Society. Equitable is probably the company that first began to monitor, and now has data on, the longest history of performance of organizational units and employees under new work week schedules.

Six years ago, Equitable adopted a new schedule with their computer operations, seeking to get the maximum productive value from expensive equipment and associated high fixed costs, and because of the heavy work flow involving data processing equipment. Employees were asked to participate in the decision-making of what kinds of schedule would best meet the company needs and employee needs. It was decided to go to a three-day shift within the context of a six-day operating week. Four shift teams work in rotation --two days on, two days off, one day on, two days off, on the daytime shift. Then the same cycle is followed on night work. Each shift works 13 hours with two, half-hour breaks and an hour overlap between shifts to coordinate work flow.

Management has found that the utilization objective was met and they have no difficulty staffing the operations. Turnover is not a problem and absenteeism is within the limits of the average absence rates of offices working five-day schedules.

Now that Equitable is planning a new facility in another location, they are considering using the same type of operation there also. Having met with success in computer operations, management next turned its attention to other areas that might benefit from better work week arrangements.

The following criteria were established as a basis for applying new schedules in other parts of the company:

1. Space for the operations is at a premium.
2. Fuller utilization of equipment could achieve cost savings.
3. There are periodic overtime demands.
4. Job design characteristics are not overly specialized or there is good back-up for each job.

The next place chosen was the data entry operation (keypunch or keytape) which was also machine-based work. When this operation became centralized at one location, management again talked to employees about the possibility of putting their work week on some other schedule to better utilize the equipment and increase productivity. Where the computer operations had involved 300 men, the data entry operations workers were 180 women who were operators and first line supervisors. The women were not willing to give up Saturday, so a plan was devised where they would work four days a week with a rotating day off, 9 hours and 50 minutes a day with 45 minutes for lunch.

The plan was evaluated after it had been in operation for two months and the results showed that the quality of individual operator performance improved substantially, attitudes toward work hours improved significantly, and there was a significant decrease in absenteeism.

Other managers, hearing of the new schedules, became interested in trying it out in their departments. One of the technical bureaus decided to try the four-day. This bureau provides technical consulting services related to group insurance operations. Coverage over a five-day week was considered essential, so a plan was evolved which used rotating days off. Hours were from 8 A.M. to 6 P.M. with 55 minutes for lunch. It was hoped that there would be improved utilization of space and equipment by having employees rotate desks. Also, there would be greater accessibility to time-sharing equipment during non-peak work hours, a reduction in employee start-up and close-down time, reduced absences, fewer commutation delays, greater flexibility in scheduling overtime, and increased opportunity to develop back-up supervision. After three months on this schedule, an evaluation of the operation showed the following results:

1. Productivity showed an increase over the 1970 base period, but the ability to complete and release work within time standards decreased. Managers claimed that this was due to factors other than the four-day.
2. There was no change in absenteeism.
3. The relationship with clients was unaffected.
4. There were increased problems of controlling absences and work flow, but they are minimal and can be worked out.
5. Desk rotation was not an acceptable concept.
6. The hoped for greater flexibility with overtime was not as practical or favorable as the company originally thought it would be.
7. There is better use of office equipment and time-sharing terminals.
8. It has hastened the development of Assistant Supervisors.

A useful observation made by Dr. Vris of Equitable(1971), was that once the new schedule had been installed, as in the case of John Hancock previously cited, it is hard to remove unless convincing evidence of adverse effects in terms of productivity, costs, and efficiency is presented to the employees.

In general, the research results on all three types of work and schedules have shown that fatigue is not a crucial factor in longer work days. For machine-based work the main effects were in terms of savings accomplished by better work-flow and use of facilities. No important advantages accrue by putting white collar workers on a new schedule, except in concentrating work flow cycles and as a personal benefit to employees. There is no convincing evidence of positive effects upon work motivation attributable to the changed schedules; meaning that the nature of the work itself is a more important determinant of the motivation of workers.

Congressional Oldsmobile, Inc. This dealership, located in Rockville, Maryland, decided to try the four-day, forty-hour week because they could not expand their building to add more service bays. Since more and more cars were coming in to the service department, it was essential to find some method of dealing with the problem. The other reason for trying out the four-day week was to attract good quality technicians by offering them an attractive work schedule. After the schedule had been in effect for about a year, management reported that it had been successful from the customers viewpoint since the hours they are open are more convenient. Also, parts sales have gone up 29%. However, there are also problems. They have not been able to attract better qualified mechanics and overhead costs have been increased because they have had to hire six more employees: two crew chiefs, two parts clerks, a night cashier, and a night car jockey.

Presently, they have 17 men in four crews with one crew chief for each crew. Once every eight weeks each man has to work on a Saturday but they always have three days off at one time. As far as the mechanics are concerned, most of them would not go back to the five-day even though not all of them like the longer hours on the four-day week. Many older workers do not like the arrangement because they do not know what to do with the extra time off. If a mechanic has a working wife, the wife does not like it and neither does the husband, but nearly all the younger workers are for it.

Levy-Ottenheimer, Inc. This clothing manufacturer, located in Baltimore, will have been on a four-day, 36-hour week for two years in February 1973. They originally decided to try it to better utilize their equipment and give their employees an extra benefit. They employ 65 women who work Tuesday through Friday. Management is not on this schedule. Production has increased between 2 and 5%. Ninety-five percent of the women like this schedule, especially the older women.

United Planning Organization (UPO). UPO is a community service organization in Washington, D. C., funded through the Office of Economic Opportunity (OEO). In 1970, when OEO would not approve raises for workers at UPO, it was decided to rearrange the work week. Originally they were going to cut the number of hours of work from 40 to 37 1/2, but when it was not approved, someone suggested that they could dispense better service to the community if they worked longer hours. It was decided to have the new hours from 8 A.M. to 6 P.M. Monday through Saturday with 88 employees working in two shifts, one from Monday through Thursday, and the second from Wednesday through Saturday. Only field workers were involved; no first line supervisors, managers or headquarters staff. The plan lasted from March through November during which time two surveys were conducted. The first survey was made three weeks after the new schedule went into effect, and 81 of the 88 workers felt very favorably toward the plan. In June, another survey showed that 71 people liked it (at that point, 10 had dropped out either because they were promoted or left their jobs). In response to questions on what they did with their extra day off, 64% said they took care of personal business, and 32% said they did not know what to do with their time off. One person had another job. The fact that 32% of the people did not know what to do with their extra day off indicates the need for better preparation of employees in adjusting their life habits. One manager suggested that counseling would be in order if the plan was tried again. It was said that the schedule failed mainly because supervisors did not trust the workers between 8 and 9 in the morning, and 5:30 and 6 at night, when they were not under supervision. This is an example of the need for supervisors to be better prepared administratively and psychologically to meet changing conditions.

American Psychological Association (APA). APA has been on a 4/37.5 schedule since March 1972. The plan is voluntary. Originally when the plan was first initiated, employees decided which day they wanted off, either Monday or Friday, and if they wanted to work on a four-day week or stay with the five-day week. If employees chose the four-day week, it was up to department heads to work out any problems with staff about days off. About half of the 150 employees are on the new schedule, and the other half chose to remain on a regular five-day week. One of the appealing features of the arrangement was that it allowed one to switch back and forth depending on the time of year (one couldn't decide to alternate days off). For example, one of the directors of the organization said that during the winter he went back to the five-day because it got dark so early and he was late coming home; however, he planned to switch back to the four-day in the spring.

APA is a service organization to its members and publishes a number of journals so that production schedules must be met. The plan was evaluated in July, at which time it was decided to continue the evaluation for another six months with one change -- everybody who works the four-day must take Friday off. Now employees work nine and one-half hours Monday through Wednesday and nine hours on Thursday. According to Dr. Gottlieb Simon (1972), the senior (and older) managers felt that communications and scheduling would be enhanced by four consecutive working days of all personnel on the four-day week rather than only three days of communications due to different work times.

After the next evaluation, APA hopes to produce data that will be useful to other associations and businesses contemplating a similar change.

Forbes Magazine. In October 1971, Forbes Magazine published in New York, decided to try the four-day work week for all of its employees. Most employees had Friday off, with a skeleton force to cover Friday who were off on Monday. Forbes work week was 35 hours for five days so they compressed it into four, eight and one-half hour days. According to Malcolm Forbes, (1972):

> I also felt strongly that the wave of the future was - is- in this direction; that many of the best of the younger generation have a burning determination to have time to do the things they want to do (in addition to working for a living) while they are young enough to do them...

In addition, the longer work days were expected to produce more efficient output and a reduction of absenteeism. The results showed that these expectations were reasonably met. However, the Forbes experiment ended because of the small numbers of people in each department and the necessity for all of them to be at least partially covered for five days. Too often there was only an effective work week of three days since some were off on Mondays and the majority off on Fridays. Another problem was the cost of temporary help; they were needed when the regular staff members were on vacation, sick, or absent. Forbes would like to be able to try it again, but only when enough other businesses are on the same kind of schedule, so that operations can be better synchronized with the people and enterprises with whom the magazine does business.

Flexi-time

As with the four-day work week, there are as many variations and permutations involved in flexible working time, or, as more popularly named, "flexi-time."

Flexi-time means that the daily starting and quitting times are flexible for the employee, but he/she must be there during a core working time. Some examples of how this is used are (from Bolton, 1971):

Flexibility within the working day. This means that employees come in within the limits allowed in starting time and work whatever number of hours are prescribed in the particular organization. For example, a company may have a core-time from 9 A.M. to 3:30 P.M., with a half-hour lunch from 12 to 12:30 P.M., and the total work hours are eight per day. The flexible hours are from 7:30 A.M. to 9 A.M. and from 3:30 P.M. to 5:30 P.M. On a given day, one employee may come in at 9 A.M. and leave at 5:30 P.M., while another might come in at 8 A.M. and leave at 4:30 P.M. In this arrangement there is no carryover of hours, so that starting time governs quitting time.

Flexibility within the working day with a flexible lunch. Using the same example as above but with lunch time from 11:30 A.M. to 1:30 P.M., it works like this. Employee A comes to work at 7:30 A.M. and decides to use the full two hour lunch to run errands. He will not be able to quit work until 5:30 P.M. in order to work eight hours.

Flexibility within the work week. Core-time and flexi-time remain the same as in the above examples, but now employees can decide to vary schedule and total hours each day, except that the weekly total must add up to the number prescribed. It does not matter if they work core-time one day and make up the missed hours in the next two or three days. The quitting time is no longer directly related to the starting time of each day.

Flexibility within the working month. Now an employee may work core-time for several days and make it up at his convenience within the month. A calendar has to be set up to let employees know how many hours they are required to work in that month.

Flexibility within the month with carry-forward. This is like the above schedule with the addition of carry-forward time, commonly ten hours, which the employee can use in adjusting his hours the following month. If there is a debit, 10 hours being the usual maximum, it must be made up within the flexible bands of worktime. These arrangements do not allow employees to use core-time as time off if they have a credit balance. The employer must have a great deal of trust in his employees in order to make this work well. Experience has shown that in those companies using this arrangement, that employees are willing and able to accept the responsibility entrusted in them.

Flexibility within the month with carry-forward and core-time off. In addition to the above arrangement, this system allows the employee to take off during the core-time, provided that he/she has made arrangements with the supervisor or department head, so that the work flow will not be interrupted.

Usually a set number of hours is allowed to be used during core-time, the rest of the credit being used during the flexible hours.

Why are firms adopting flexi-time? H. Allenspach (1972) has given the following reasons.

1. The transportation problem is one of the major ones. Many firms were obliged to stagger work times and also turn a blind eye to tardiness. Inflexible working hours were more or less fiction. "Flexible working time legalized, and put order into, a situation that had become chaotic."

2. The regularly scheduled long mid-day lunch period -- mainly a European phenomenon--where large numbers of employees are accustomed to going home for lunch. These people want a longer break because of traffic jams; while those who eat at or near work want a shorter break. In the U.S., this could be applied to employees who have errands to run, etc.

3. Another reason, which is mainly European right now, is the tight labor market which obliges employers to attract new categories of workers. A flexible work week allows more married women to enter the labor market. This is not as important in the United States since part-time work is much more available than it is in Europe.

4. Workers will often take a whole day or half-day sick leave rather than be late for work, whether or not the reason is valid. This can be avoided through flexi-time.

5. By adjusting working hours to better suit a person's efficiency cycles, one can increase output and reduce accidents. The employee may take a greater interest in his work and the work atmosphere improves. Fluctuations in staff may diminish in some cases.

6. As with the four-day week, firms may take advantage of this system in order to attract staff, especially in a tight labor market.

7. Newer concepts of management that seek to give workers a greater share of decisions can be reinforced by flexible working time.

Mr. Allenspach has also listed several cogent reasons why employees would be motivated by flexi-time, they are:

1. As mentioned earlier, each person can adopt the work pace that most suits his individual needs within certain limits.

2. Workers who are in the middle of a job do not have to stop because it is quitting time; on the other hand, they regard it as an injustice when extreme punctuality is demanded for arrival at work.

3. It is more convenient to have workers decide when the best times are for going to and from work to avoid traffic jams and, when workers can set their own hours, the massive traffic jams which now occur could be diminished in the future. Also, the psychological pressure caused by having to arrive on time is eliminated.

4. Flexi-time could be a boon to married couples who work in different organizations, by their being able to work the same hours.

5. Whereas the four-day week allows an extra day in which to shop and do errands, make appointments, etc., flexi-time provides opportunity for this within the normal work day.

Problems are involved in initiating flexi-time, of course. Not all firms or jobs in certain firms are suited to flexi-time. For example, some people are necessary during the opening hours, such as switchboard operators, and receptionists. Obviously, it would be difficult to have people like bus drivers on flexible working hours.

Some jobs are closely interlinked such as in assembly lines and continuous processing. If component activities are not coordinated, chaos can ensue. This is not to say that manufacturing firms could not go to flexi-time. It is possible with careful planning. In Switzerland, a watch manufacturer which does operate an assembly line is trying it out now. But most often the firms that have adopted this plan have only white-collar workers. As Janice Hedges (1972) has stated, "Flexible work weeks give better opportunities for humanistic management. Considerations of flexi-time are given to humans and not technology." In a trip to Germany and Switzerland to study flexi-time companies, she found that companies adopted this schedule because it was a more efficient way of operation. One company experienced a high rate of tardiness which they found was related to traffic congestion. By adopting a flexibile work schedule it enabled them to meet worker needs and be more productive.

As has been illustrated above, the variations can be quite numerous. Obviously, record keeping must become more elaborate as the numbers of options included in a system are increased. However, it is notable that this factor has rarely been cited as an important negative consideration by employers or employees with flexi-time experience. Most firms have time clocks or on-line computers to record times. This obviously will be an additional expense for many firms, as will also be, in some cases, the overhead involved in having the firm open longer hours. Such items as lights and maintenance will require extra costs. To avoid making "clock punching" a low status symbol, in some firms executives also punch the clock. If more productivity is the result of flexi-time, overhead costs will be minimal compared to the gains, both for the worker and the company.

In the United States, the Walsh-Healey Public Contracts Act, which specifies overtime after eight hours a day, might be a stumbling block for some firms. Since most flexibility is provided by a time frame set within a month, the Fair Labor Standards Act would also be an obstacle since this makes provisions for overtime after 40 hours a week and it would be impossible to carry hours forward with these constraints.

The firms that have converted to flexible working time in Europe solve their overtime constraints in one of two ways. The first is to pay overtime only after the hours due by the worker on account of flexible working time have been made good. The second system assumes a hypothetical working week and overtime ordered which does not exceed this time is not compensated by extra pay; if overtime does exceed this period, it is paid.

Case History. To provide a bit more operational flavor, we will give here just one brief case history of flexi-time.

The first company to introduce "flexi-time" was Messerschmidt-Bolkow-Blohm (MBB) in 1967. MBB employs 4,000 people at its company headquarters outside of Munich. The administrative, research and technical development departments are here, while the manufacturing units are located in other parts of Germany.

Traffic congestion at the plant entrance made many workers late to work. They would get ready to leave work 20 minutes before quitting time at the end of the day. The personnel manager decided that there had to be a more efficient method than the fixed schedule the company followed at that time, and he conceived of the idea of working a core-time with flexible starting and quitting times around it. The system works like this (Bolton, 1971):

> Everyone can start and leave work when he finishes. He is obliged, however, to conform to two basic conditions.
>
> 1. To be present during the core-time, which extends from 0800 hours to 1600 hours (1530 hours on Fridays), apart from a fixed lunch break of 48 minutes.
>
> 2. To work his contracted number of hours per month with a tolerance of plus or minus 10 hours which may be carried forward to the next month.
>
> All employees "clock in" but time clocks are now strategically placed near their offices. There is no queue to beat; jobs that have been started can be completed as time can be taken off in lieu of another day.
>
> People who need time off to deal with personal matters now do so, whenever possible, in the flexible time and make the hours up later.
>
> Recording for project costing is now carried out on the "clock card" and is much simplified.

In Germany the maximum hours of work per day are 10, so the schedule was set up as follows:

	Starting Band	Finishing Band
Monday - Thursday	7-8 A.M.	4-6 P.M.
Friday	7-8 A.M	3:30-6 P.M.

Since the majority of employees are paid monthly, it was decided to settle the time cards at the end of the month.

The results of this experience have been that: the majority of the employees have a fairly constant credit of 3 hours and 50 minutes, with only 1% of the employees exceeding the 10 hour debit, and in most of these cases this is found to be due to missing entries on the time cards or emergencies; employees no longer sit around watching the clock; they can work at their own pace. In a survey conducted by management two years after flexi-time had been implemented, the results were: nearly two out of three employees said that working conditions were better under the new system; 27% said working conditions were the same as before, but most of these respondents had to rely on the bus system run by the company and could not take advantage of the flexibility offered by the new schedule; when asked what the personal benefits of flexi-time offered, the majority said that there was a "better balance between work and private life" closely followed by the response "easier travel," 79 employees out of 4,000 thought that there was reduced time available for communication; 88 employees were sorry that the system could not be extended to employees who were not included, like bus drivers and security officers; only seven employees cited personal disadvantages working under the new system.

Both the four-day week and flexi-time are deserving of wider dissemination and tryout. Both systems give the worker more freedom and control of his own life. Certainly as time at work decreases, it becomes increasingly possible to make it more varied (Hedges, 1972).

Summary

The two major types of work schedule innovations we have discussed in this section are: (a) the four-day week which makes larger blocks of time available to the individual to pursue other interests, and (b) flexi-time which permits the individual more control over his work time and time for other activities.

Both types of schedules were mostly initiated by management in a search for greater productivity and better utilization of manpower and equipment.

We will close this chapter with brief statements of the highlights of the experiences reported here. Subsequent chapters will be devoted to more extended consideration of the issues raised.

The four-day week. In the United States the appeal of greater productivity and better utilization of equipment and better work flow has caused many small firms or departments of large firms to try out the four-day week. Its appeal to workers is in a large block of useable leisure time, less commuting and maybe easier commuting due to reduced traffic congestion. Commuting costs, lunches and child care costs are reduced in many cases.

Not only are the habits and values of employees at stake, but management must be thoroughly prepared both administratively and psychologically for a changed schedule.

Companies need to make their expectations clear and collect the information necessary to check them out. Thus, by way of illustration, one can point to organizations who assume that more days off will be accompanied by more worker satisfaction, which will lead to more production. When increased worker productivity is not the outcome then "happiness" is subtly substituted as a criterion, and the management instituted change is rationalized as the gratuitous offering of an employee benefit.

Before converting to a four-day week, an organization has to ask these kinds of questions, since once on a four-day week, it is often difficult to turn back again to the five-day. Can you accommodate an atypical schedule into the larger scheme around you? For example, what types of transportation problems will result after a conversion for the business and for the employees? Will the new business schedule hinder communications between your firm and other firms? What about the coordination of workers and supervisor schedules?

A whole pattern of legislative and collective bargaining constraints originally designed for other reasons impose obstacles. The four-day week is somewhat easier to put into practice if a company is willing to pay time and-a-half for overtime over eight hours a day, or if its work week is below 40 hours a week.

Most unions are against the four-day week. They feel that it would be alright to try it, if the work week is reduced to 4/32 or if employers are willing to pay for overtime after eight hours of work in one day.

Fatigue is an unknown factor in many jobs involving the four-day week because studies that were done in the 1940's are no longer applicable today.

Hardly any controlled experimentation has taken place with the four-day week to determine its long term effects. Quite often other changes are made at the same time that are not taken into account in evaluation. The studies which have been conducted show both positive and negative results and, until more is known, one should be wary of the more exuberant descriptions of happy employees.

Other considerations bear on the individual off the job. Is he/she able to effectively use his leisure time or does boredom set in? How will the four-day week affect his/her family life and friendships? Do larger blocks of free time act as a motivator offsetting other negative affects?

Flexi-time. Flexi-time is a Eurpoean phenomena which, to our knowledge, has not been attempted in the United States (although many firms such as R&D companies, advertising agencies, may do this in a non-formalized fashion). Many of the issues related to compact work schedules apply here as well. A few special circumstances apply.

Legislative constraints do pose a problem for firms wishing to try out this concept, but as in the case of the four-day week, it may be possible to try it out in firms which do not work 40 hours a week and do not have an eight hour day restriction.

One point that must be borne in mind is that if a company decides to experiment with flexi-time and needs to use time accounting procedures as equipment, everyone in the company (or department or section) should be on it since it will raise less resentment if clock punching is required for everyone other than just the lowly workers.

It will be noted that this chapter reflects the fact that many of the enthusiasms originally associated with the initiation of the administrative experiments have, with the passage of time been tempered by the realism provided by accumulation of greater experience.

Chapter IV

TOWARD A GENERAL PERSPECTIVE

With the data and discussion in the preceding chapters as background, we see that innovations such as the four-day week and flexi-time have importance that goes much beyond their current forms and present degree of popularity, or their particular assets and liabilities as administrative techniques or management tools. They bring to the fore and illustrate a whole host of challenging questions affecting larger, long-term issues.

A Glimpse Ahead

We are coming to recognize with increasing clarity that we are confronting problems that reach beyond the mere redistribution of time and activities, but that represent substantive alteration of the nature and quality of life. We see a reshuffling of interrelated elements within the total complex of our life styles and our social, political, and economic organizations.

In years past, when people had little time to spare from their work, most attention was focused on problems, policies and research on the nature and conditions of work. In recent years, as the proportion of time devoted to paid employment has progressively declined, and as we look ahead to continuing (though possibly decelerating) trends in this direction, we have come to recognize that increasing attention must be given to the nature, condition, and effective use of non-work hours--the time devoted to study, rest, and leisure.

Any serious planning in this area has to consider the continuing trends toward a reduced individual work week, and questions about rates and limits that are desirable. For example, we see more stores staying open later hours and on all days of the week presumably manned by employees with desires for a reduced work week. Similar questions may be raised about what will happen with doctors, public agencies, and the whole range of personnel service operations if a greater variety of patterns of work materializes. Nor can we overlook the changes already underway in career planning and organization of the home, as greater flexibility in scheduling work of female employees passes from a demand of select groups to an established fact.

At the level of the individual, as a case in point, we can draw upon the preceding chapter to make a case in point with the four-day, 40-hour week, and briefly sample a few of the ramifications.

Given the hypothetical case of a married female office worker with one child who shifts from the 5/40 to the 4/40 week. She now has a day free to do shopping while her child is in school, and she can take the child to the doctor for his booster shots without taking a day off from work. Or maybe she will use the time to take a course that will help her get promoted. But, the bus runs less often when she leaves work now, though she can get a seat that was full during the rush hour; and she has problems arranging for child care since the lady who has been taking care of the child is not available for all of the new 11 to 12 hour daily span; and her husband and child are not accustomed to early breakfast and late dinner. And if the office goes on a rotating day-off schedule, her headaches are even greater. Longer weekends for her, but not her husband, raise questions that did not exist before, e.g., "Should she take a weekend trip with a group of girls from the office?" And the web spins on.

Obviously, it requires not much imagination to illustrate with a single case the interdependence of work and leisure. Multiply this quite simple case only a thousand times and we see vividly a tremendous potential impact upon the social warp and economic woof of the fabric of our life styles.

We also need to be aware of what is happening as a consequence of increase in total life span being coupled with a reduced worklife span. Thus, the person who retires at 60 and lives to 75 has the equivalent of 32,000 working hours that can have potential for creative use. As a larger proportion of life is spent in retirement, we have more than a shift in numerical or biological phenomena. A chain of qualitative changes affecting every phase of life for the individual is an accompaniment (Kaplan, 1967; 1970a).

We have become aware that plans and policies for new patterns will need to cope increasingly with problems of psychological and sociological behavior. We now realize that understanding of economics and politics is not enough. This point is brought home when we find ourselves handicapped by a data deficiency because these matters were given scant attention in the past. As a President's Scientific Advisory Committee panel (1962) found: "We know something about how people spend their money, but almost nothing of how they spend their time...."

A common perspective needs to be created for studying these various forms and patterns of life activities. One component cannot be taken alone without consideration of the other ones. So it is that, while the literal title of this study deals with patterns of working time, we find that in order to adequately picture the situation, now and in the years ahead, we must, in fact, devote as much or more attention to how non-working time can be beneficially utilized. For ultimately what we must seek to achieve is a creative mix of work and leisure activities that provides for the individual a more fulfilling way of life, that allows for uniqueness and self-actualization; that in the aggregate affords society at large greater opportunity for mutual sharing of the better things in life; and that promotes a value climate in the social community (or various kinds of communities) that reinforces continued seeking, experimentation and evaluation of increasingly varied means for making this a better world to live in.

Accelerating Rate of Change

Those who attended school in the pre-World War II era were still conditioned by the implicit assumption that when their years of secondary or higher education came to an end--when they entered the world of work "for real"-- they would have acquired most of the fundamental skills and knowledges that they would need to support their work and general life activities from then on. The picture of the world and one's adjustment to it still had a rather stable character. Obsolescence was not very threatening. Relevance was more or less assumed. "That is no longer so. The rate of change has increased so much that our imagination can't keep up (C.P. Snow, 1966)."

Now we see further complications; as change occurs more rapidly, the time to prepare for it decreases. Our institutions must develop better methods to reduce cultural lag and overcome social inertia. We need to achieve, to quote T. Hoopes, "the capacity to treat as real and urgent, as demanding action today, problems which appear in critical dimension only at some future date (Spilhaus, 1972, p. 714). Policies anchored in the status quo are soon obsolete. To accommodate to an increasing rate of change, more lead time may have to be built into forward planning--e.g., the conventional "five-year plan" perhaps ought to be declared obsolete, and replaced by a "ten-year plan" as the typical long-term planning unit.

A startling vision of the changing world that lies not far ahead of us is given in Future Shock by Alvin Toffler (1970). He is one of an increasing host of "futurists" who provide mixes of scholarship and fantasy to drive home the conclusion that, in many respects, we are passing the point of no return, that the future is now, and that procrastination and timidity in confronting and coping with the real issues can court disaster.

Looking ahead in a systematic fashion, from the outcomes of a Delphi inquiry process carried out by the Institute for the Future with a highly diversified group of professionals, we can extract a number of themes to depict a scene into which we can project further consideration of the future allocation and use of time (Gordon & LeBleu, 1970; Enzer, Little & Lazar, 1972).

The panel identified 32 events judged to be most important to changes in time/money budgets in the future. Among the futures that may result from the occurrence of events that were rated as 50% or higher probability by 1985, they saw such as the following:

____Virtually all businesses will increase time off from work by at least 25% for civic, political, professional, and personal activities and the full-time work week will decline to 32 hours or less (35 by 1985), with more effect upon male workers than females, along with a greater sharing of household activities and increased expenditures for recreation.

____Education for all workers will rise sharply. The high school dropout rate will decline. Most of the college-age group will enter college. Lifelong work-study programs will become more available. Interest in cultural activities will increase.

____An increased demand for personal transportation is anticipated, associated with increased leisure time, despite general subsidization of mass transportation.

____Average vacation time will at least double.

____Most married women will be in the labor force. Government-sponsored day care centers will exist in most urban centers.

____Very likely is the enactment of a guaranteed annual income of at least $5,000 per year (1968 constant dollars) for a family of four, and a doubling of Social Security payments.

These projections fairly well represent the salient characteristics of those made by others in the field.

It has come to be rather generally accepted that in the remaining years of this century we face the prospect of substantial changes in the orientation of our work-centered and leisure-centered values and motivations. We are on the verge of considerable social experimentation with new patterns of work and leisure time activity. As we confront these prospects,we note considerable gaps in the information that we require. For meaningful comparison of different approaches to decision-making in the total context of life management, generally accepted criteria need to be developed.

Chapter V

INDIVIDUAL CHOICE AND ADJUSTMENT

When we focus upon the individual choices of the worker involving the use of working time and free time, related problems and satisfactions, benefits and losses, two sets of major determinants come into play. One consists of the structural factors that facilitate or constrain his election of choices, which we will consider later in this chapter. The other consists of his own personal preferences. We will pursue that subject here.

Personal Preferences

Dealing first with personal preferences, for purposes of discussion, we assume that a range and combination of work and leisure options are available to the individual.

First of all, he must know about the available alternatives, otherwise, they are for all practical purposes non-existent. The main channels for developing this awareness are the individual's past experience and education. These can be supplemented through various communication media and processes. The experience may be the direct personal involvement of the individual or it may be the experiences of others communicated to him. To the extent that his past education and experience have been narrow and the opportunities to broaden them are limited, the opportunities for the individual to enrich himself--either financially or psychologically--through constructive use of increased free time are correspondingly constricted.

The orientation and value the individual gives to the available forms of work and leisure, also determine how he allocates his time resources. Thus, individuals who highly value their work and derive great satisfaction from it, may seek few other ways to achieve life satisfactions. These are the people of whom it is said, "their work is their whole life." For others, their job may be an unattractive burden, borne in order to gain the time and money to do the things they really want to do.

Again, it needs to be emphasized that for the individual, work and leisure are not spheres of activity that are psychologically separate. There is not one set of psychological needs and principles that applies only to work and another set to leisure. The individual draws from both spheres in seeking life's satisfactions and his perceptions and activities are integrated in a continuing process of seeking to achieve reasonable adaptations in a real world. The goals and the needs he seeks to fulfill in the two domains may be symbiotic and mutually reinforcing; they may be conflicting, or they may be complementary--a satisfaction absent in one domain is found in the other. More attention will need to be given to how such needs and principles exist and apply in leisure time, as well as work time, lest we find that an increase in psychologically non-productive free-time simply transplants the seeds of discontent from the work site to the home site and community.

Segal (1967) offers the hypotheses that:

> Individuals who have learned to commit energies toward goal achievement will characteristically find minimum difficulty in making commitments, within the constraints of the social structure, as they choose employment, chore, leisure and free time activities, while individuals who have experienced developmental difficulties in learning to commit energies toward goal achievement will show a consistent inability to make such commitments in any area; or inconsistency and unreliability over time from area to area (p.2).

Research by Havighurst (1961) provides some data supporting expectations that positive correlations will be found between a person's energy expenditures in one area with the vigor of his involvement in other areas.

Leisure should not be treated as a "substitute for living," but as a means for better living (Lens, 1966, p. 172). New time can provide men with new meanings; a new philosophy (Prehoda, 1969). "But the new time like the new resources under the hard surface, must be developed with priorities and values for utilization" (Kaplan, 1970a, p.6). We need new patterns of life styles; not simply a grafting on to old patterns.

> All theories based on a conception of work, family duties, political activities, or educational activities are bound to fail if they consider leisure merely a compensation or a complement to institutional obligations needed for the functioning of economy or society, without reference to the mutation of the new individual's needs (Dumazedier, 1971, p. 203).

Illustrative of this theme is some of the unsatisfactory experiences we have seen with the four-day week in the instances where it was handled by management as primarily an employee benefit instead of as a rather fundamental redesign of the job and habit patterns of employees.

A person's orientations are also a function of the characteristics of the individual and of the society and its subgroups of which he is a part. Most projections and planning, for lack of adequate breakdowns in statistical data, have tended to treat the populations involved in studies of work and leisure as having relatively homogeneous (average) characteristics, values, and preferences, when, in fact, differences may be marked between sexes, age groups, educational backgrounds and socio-economic classes. The variance within each group may also be quite large. An illustration of this, in the case of distribution of weekly hours at work for different types of occupations, is provided by Ennis (1968, p. 554) in Table 4. Only recently have attempts been made on a broad scale to study the use people make of their time in the context of daily life that take into account patterns associated with distribution of activities, regularities in timing, duration, frequency and sequential order (Szalai, 1971).

TABLE 4. HOURS AT WORK AND OCCUPATIONAL GROUP, 1965

	Percentage distribution of weekly hours at work				
Type of occupation	*Less than 35 hours*	*35–40 hours*	*41 or more hours*	*Total*	*Average hours weekly*
Professional, technical, and kindred workers	16	49	35	100	41.4
Managers, officials, and proprietors, except farm	8	32	60	100	49.4
Clerical and kindred workers	20	64	16	100	37.4
Sales workers	30	34	36	100	37.8
Craftsmen, foremen, and kindred workers	11	52	37	100	42.3
Operative and kindred workers	14	53	33	100	41.2
Domestics	66	19	15	100	24.1
Service workers, except private household	29	41	30	100	37.8
Laborers	31	46	23	100	35.5
Farmers and farm workers	23	13	64	100	52.1
Farm laborers and foremen	42	17	41	100	39.4

SOURCE: Bureau of Labor Statistics, *Labor Force and Employment in 1965*, Special Labor Force Report No. 69, Washington, 1966, Table D-6, p. A-31.

So long as the organization of our industrial society remains essentially work-centered, the timing of work continues to be central to organization of all other activities (Segal, 1967). Preparing people for, and maintaining people in work, has presented a guiding principle for most of our social institutions.

The individual has been expected to accommodate to the predetermined structure; "...the rhythms of life are mechanically paced: time is chronological, methodical, evenly paced" (Bell, 1972, p. 165). Individual differences have represented a problem, but the main concern has been to keep at a minimum the impact of individual differences on the total system's operation.

Until relatively recent years, work and work-related personal and family maintenance activities consumed nearly all of an individual worker's time in highly industrialized countries, so that the use of free time was "unimportant." We are now approaching the point where large numbers of people will have major segments of their time schedule to "play" with. The fact that "days off" in some jobs already exceed the number of "work days" certainly increases the pressure toward greater flexibility in the timing and use of leisure as well as of work.

As we enter upon "the post-industrial era" our orientation and values are undergoing metamorphosis. Greater freedom from the demands, controls, and structuring of activities associated with time spent as part of producing enterprises will allow us to give more attention to individual fulfillment through individually different patterns of activities. As individual fulfillment becomes raised to a higher level of concern by society, the values and organization of social institutions will no doubt evolve to meet the changing needs and to revise the accompanying relationships.

Individual and social planning for constructive use of free time now comes to assume a far more important role than it has had in the past, and more substantial facts and theory should be generated in support of such planning and the implementation of resulting policies.

Changing Individual Values of Work and Leisure

In the formulation of such plans, one might contemplate that, to the extent that larger proportions of life-time and life-space are devoted to non-work, the possibility exists for substantial alteration in orientation toward work and toward the organization in which one is employed. One might theorize that as less time is spent on the job, identification with interests of the employer may be decreased. This may happen because the reinforcement associated with working situations is proportionately less, and because other strong competing interests may have a greater chance to become salient. So that, for example, if greater amounts of free time result in more multiple job holding, a "conflict of interest" may diminish the exclusive "loyalty" that a single employer can command. Even relatively satisfied workers have more opportunity to "window-shop" for other jobs. We have too little experience as yet to do more than speculate on the possible effects this kind of situation may have on morale, turnover, quality of work, and labor-management relations. The concept of a work career also undergoes considerable change, perhaps characterized by more deliberately planned inter-job mobility than is now the case.

The model of the individual as a rational economic man, operating in an open market, has been subject to many qualifications and limitations with regard to his behavior as a consumer of goods and services. More and more we have felt the need for education to better equip the consumer to take care of himself in the market place, and laws to protect him against others, and often against himself.

In his use of increasingly available leisure, it is unreasonable to expect "natural" rationality to be consistently exercised in an effective manner. Large numbers, particularly among the lower socio-economic classes, are being exposed in the high technology society for the first time to the problems of disposing of substantial increments of free time (Schlesinger, 1971). For people of all ages, the needs for education and protection become comparatively greater in the leisure activities area (Shubik, 1967).

There is the temptation to make the simple assumption that the "more free time the better." Obviously, to translate "more" to "better" we must take into consideration, for whom, for what purpose, and under what conditions. Furthermore, we might ask: Does increased leisure lead more people to engage in "self-actualizing" behaviors (Maslow, 1964)? Can society tolerate, individually or collectively, a largely self-actualized population? Would the psychological meaning of self-actualization become altered when "everybody's doing it?" Does a society become placid when stimuli provided by risk, competition and struggle are largely absent?

A related question that bears study, is whether management is unwittingly reinforcing worker values that it does not share--planting seeds of conflict (Wilson, 1971). We refer here to management's holding out increased leisure as a reward , thereby creating a condition where leisure is given an enhanced value that strengthens an anti-work ethic--the value of leisure is enhanced at the expense of work motivation. Aversive conditioning toward work is increased for workers, while managers, for whom work provides greater fulfillment, continue to adhere to the "old" values. As alternate gratifications through leisure activities take up more time and assume greater prominence in the scheme of life, job-related task orientation may be reduced in competition with other activities and objectives. To some extent, such revision of motivating values may offset gains in technological efficiency.

Conflicting values are also built in as individual firms and society at large place even greater emphasis on the worth of education for broadening the competencies and horizons of youth--who then find that the choices and structures of jobs have not been broadened to correspond with the expectations that have been induced. Greater efficiency in the utilization of manpower is frequently accompanied by rigidification of tasks, reduction in the utilization of skills, increased routinizations; opening the door to job dissatisfaction for a new generation of highly educated workers (O'Toole et al, 1972).

Another aspect of aversive conditioning is illustrated by a study of attitudes toward a prospective four-day, 40-hour week, by Gannon and Reece (1971). They found, with a sample of engineering technicians, that those who were most dissatisfied with their jobs were most opposed to the prospect. One reading of this result could be that, for the person who is already unhappy at work, a longer daily exposure is not tolerable to begin with; so that it is difficult for him to regard an extra day off as a real, compensating alternative. Also, where the negative affect may cumulate multiplicatively (i.e., aversion builds up at "overtime" rates) "equal time" off is not psychologically equivalent. Managers are likely to recognize the impact of cumulative physiological effects. They are more likely to overlook the fact that subjective effects may mount in a similar fashion. Once more, therefore, we see tangible evidence that management of public policies are naive which assume that there exists somewhere a simple formula for optimizing satisfaction and efficiency by trading X units of free time for Y units of work time.

We cannot lose sight of the fact that most individuals depend heavily upon the organizing sturcture imposed by a full and consistent work schedule. It is important to their psychological well-being. Long periods of unprogrammed time and a recurrent need to elect alternatives or to reorganize plans, may be very unsettling. Similarly, for some people, their jobs are the only interesting and purposeful activity in which they engage. When given more time off the job, their frustrations, conflicts and boredom increase. The work that one does is often the most important source of self-identity (Wrenn, 1964). One's sense of identity and social standing derives largely from one's occupation or profession

(Dubin, 1972). Furthermore, it is often true that the physical and social environment at the place of work is considerably more attractive than one's home and neighborhood. So, we find from nationwide surveys that the vast majority of employed men say that they would go on working even if they inherited enough money to live comfortably without working (Kahn, 1972 , pp. 178-179). For most adults, research indicates, the solution to dissatisfaction with work would be sought in another kind of job rather than in more free time (Meyersohn, 1972).

On a general level, to the work ethic has been attributed much of the motive power for industrial societies. The value attached to hard work, the need for men to work, and the justification of profit, all helped to form the basis for modern capitalism (Weber, 1930). These values and rationales may become diluted. On the other hand, if the matter is seen as not a choice between work and leisure, but a synthesis, then Kaplan's observation applies, that: "It is not work *per se*, after all, which is the basis of the Protestant ethic; it is being needed, obtaining dignity for oneself by contributing to the general welfare (Kaplan, 1970a, p.11)." Then the challenge becomes one of creating the conditions and the supporting climate in society that enables people to feel needed, obtain dignity and contribute to the general good in work *and* leisure.

Hence, policies that implicitly regard free time only as an escape from work are operating within a biased and incomplete conceptualization. Or, in Dumazedier's words: "...the humanization of work through leisure is inseparable from the humanization of leisure through the values of work (Dumazedier, 1967, p.87)." Again, it is obvious that to be able to appreciate the "better things of life," many people will need help to acquire new skills, knowledges and attitudes. Many will need to learn how to share in these benefits, and to learn how to evaluate the choices open to them, and to adjust and manage life under changed conditions. It may well be that an explanation for the fact, noted before, that a minor share of increased productivity has been converted to free time, is that--in addition to individuals' economic imperatives--a good many people are simply not yet able to visualize constructive uses of free time that would represent meaningful alternatives to paid employment.

As life comes to orbit increasingly around leisure instead of work, then in the context of leisure there must be implanted the possibilities for personal growth and fulfillment that may be removed from the inventory that work has to offer. As Max Kaplan (1970a) says: "We need models to think with, in this case meanings or values through leisure (p. 14)."

A caution should perhaps be introduced here. Some observations about leisure and the working man have reflected an elitist taint. The "upper classes" have always worried that if the "lower classes" had more time and money, they would just drink more and engage in other slothful behaviors. Obermeyer (1971) warns that: "Creative leisure cannot be modeled on the kind of leisure that intellectuals have enjoyed and developed in the past (p. 225)." Labor leaders have expressed irritation on this score. The "solution" to the problems of unfree work," Blauner (1964, pp. 183-184) states, is not to be found in "a division of society into one segment of consumers who are creative in their leisure time but have meaningless work and a second segment capable of self-realization in both spheres of life."

Elaborating upon a similar theme, Kaplan (1970a) says:

> Neither the models nor evaluations of their implementation should be tied to mass triumphs. Given a new set of creative conditions which I observe even in our so-called and disparaged "mass culture," the keyword is accessibility; it is then the educator's duty to desire miracles of creativity but the citizens' right to aspire to pleasant conformity. Our task as leaders in conceiving and implementing new conditions for man are to observe the strengths of the new, provide creative options for all, expose persons to the new options, and assist them in forming higher aspirations for themselves. More than that is both unrealistic and self-defeating (p. 18).

People cannot be made to appreciate "the better things;" they can "learn to after they have had access to experience with those things. The values, purposes, and satisfactions of needs must be shaped and distributed to suit the developmental status, cultures and economics of the people involved.

Structural Constraints Upon Choice and Change

Individual choice and decisions affecting organizational change operate within limits set by existing structural constraints. We will consider here some of those which are most salient and prevailing.

Human resource economics and accounting principles. One global limitation stems from the absence of tangible values assigned to human resources and to leisure variables in most economic theory and accounting models in actual use. As Flamholtz (1972) points out:

> Although the economic importance of people is well recognized, few organizations attempt to account for their human resources. Conventional accounting systems treat expenditures made as investments in human resources as expenses rather than as assets. Thus human assets do not appear on financial statements. Similarly, organizational information systems typically do not measure and report on the value of human resources and changes in their value over time.

As one related consequence, business or government investments in leisure-time activities almost inevitably show as a loss in comparative cost-benefit analyses because there is no way to input constructive benefits. This is true not only in the accounting sense; the absence of tangible indices can concommitantly induce in policy-makers a negative bias in perception of the psychological values that can be derived from better use of free time.

So far, only one writer has attempted to develop an accounting rationale to make possible a flexible redistribution of time-off alternatives. In Kaplan's (1972) model time rather than dollars is the constant unit of exchange.

> Simultaneous patterns may be anticipated--going to school and working during the same year; flexible patterns open when the line between work and retirement is minimized or eliminated, so that one travels or takes his intermittent sabbaticals while he is involved, healthy, or before his wife has three children; he works in his 60's and 70's, and pays the interest on the time he borrowed, by work energy, exactly as he now repays the money he borrows (p. 12).

Samuelson helps to reveal a blind spot that has impeded constructive thought and planning on the subject of leisure by pointing out that:

> If...people decide that they want more leisure, the fact that will slow down the growth of the G.N.P. is only a reflection of the way in which we measure that magnitude. If leisure were somehow reckoned in the G.N.P., much as we reckon other good things of life--apples, oranges, back rubs, ballet and football games--there would be seen to be no true reduction in G.N.P.... (Newsweek, November 16, 1970, p. 57).

To which Mitchell and Baird (1969) add that a nation can measure itself not only in terms of National Income Accounts but also "National People Accounts," and "have the option of producing better people rather than more or improved goods (p. 19). Increasing research and development in the field of social indicators reflects the growing acceptance of this point of view.

Other general economic policy determinants which control apportionment of resources, also govern productive output and set limits upon personal income and free time. Defense and welfare obligations are taxes upon national economy with general effects. Regulation of output to protect against pollution or preserve ecological balance has differential effect upon different sectors of the economy and population.

Furthermore, time, dollars and energy are not the only units with which costs and accomplishments can be audited.

> "They are necessary measures, but in the absence of comparably comprehensive and valid data about satisfaction and dissatisfaction, positive mental health and stultification or outright illness, the measures of economic and engineering outcomes urge one-sided and limited social policies (Kahn, 1972, p. 203)."

Because the nature of the yardstick used tends to determine organizational policies and procedures, to provide a source of balance we are beginning to recognize that we should introduce into our formal reckonings social indicators of work and leisure satisfactions and meaning (Blau, 1955; Berelson & Steiner, 1964; Ennis, 1968; Sheldon & Moore, 1968; Kaplan & Bosserman, 1971; Kahn, 1972a; Meyersohn, 1972; Bauer & Fenn, 1972, 1973).

Formal and informal regulation. Formal restrictions are imposed and options are allowed by regulating factors such as law, and contracts and collective bargaining. Traditions and custom often have equally compelling strength. The culture and the law have treated working women differently in many important respects. Social Security laws set limits on the working time of "old" people. Education and labor laws also govern the time of entry of young people into the labor market, and the time and kind of work that they may do. Once men and women enter the work force on a permanent basis, opportunities to select educational options as free-time activities still only exist for a minority, though the numbers are now growing rapidly. Generations of struggle by the labor movement have gone into establishment of the 8-hour day as standard; hence, any tampering with it tends to breed suspicion and to inhibit experiments with less orthodox distribution of hours of work in the work week (U.S. Department of Labor, 1971). Competition within and between industries and national economies set limiting conditions. Governments continually engage in economic planning, incorporating policy patterns and degrees of stringency or latitude that determine the range of choice of a working pattern available to employees and to employers.

Intragroup dependencies. On a more individual basis, degrees of freedom for family members to exercise free time options depend greatly on how much provision can be made for child care and for care of the elderly, sick and disabled. Since home responsibilities still fall mostly upon women, provision for assistance in care of dependents exerts special leverage upon free time available to women. With the proportion of total population in civilian employment ranging from approximately one-third to one-half among the more industrialized nations, and still declining, along with average length of work week and day, the dependent care factor tends to become an ever more sensitive influence upon work time and life activity patterns (OECD, 1967; Kreps, 1968).

By and large, structural factors treat everyone in the group alike. "Fairness" has been essentially interpreted as dealing with everyone in the same way. "Organizations deal with the requirements of roles, not persons " (Bell, 1972, p. 166).

Individual differences have proven to be as difficult for unions to handle as for management, as illustrated by the strong weight given to seniority as a basis for election of options by employess. In a similar vein, the labor organization, like the employer, has usually not felt that it could or should exercise any great influence upon how the individual manages his free time. Labor unions, have generally felt that they could and should direct their greatest effort and influence close to the work scene. Perhaps this is one reason why it has been difficult to get unions to accept arrangements that afford workers a choice among alternative combinations of wages and hours of work. It may be that what some have interpreted as relative indifference of labor leaders about what their members do with their free time simply represents an acceptance of the proposition that there is not much they can do about it (Wakefield, 1966); that the members regard life off the job as none of the unions' or the employers' business.

However, contraindications are found in a study of extended vacations carried out for the United Steelworkers of America (1967). That survey showed that the vast majority of respondents felt that the union should be concerned with members' related non-job problems. This ties in with studies by Herrick (Sheppard and Herrick, 1972, Chapter 12) that show that workers themselves tend to say that work-fulfillment needs improvement more than pay, while union leaders have the contrary opinion, voiced by Victor Gotbaum, an executive of the American Federation of State, County and Municipal Employeers AFL-CIO, that: "At the reality of the bargaining table, the membership won't trade job satisfaction for less dollars" (Price, 1972, p. 37).

Yet, we observe that issues involving greater flexibility of structure, and more individual and management options in the work day and week, have become increasingly prominent in current interactions of labor, management, and government. Thus, the surge of interest and experimentation with reallocation of the hours of the work week among a lesser number of days has sparked vigorous debate among labor leaders and employers as to where the ultimate benefits lie. So far the debate for the most part has followed traditional lines--income, hours, and working conditions. However, looking ahead, we may see the colloquy turn more to such issues as the character of work, leisure and life quality, as they relate to non-economic individual gratification and social worth (Price, 1972).

Symbolic of this is the announcement that, for what is believed to be the first time, a major union will make job satisfaction a contract issue. In anticipation of 1973 contract negotiations the United Auto Workers has asked the Chrysler Corporation to begin talks on how to "humanize" jobs on the assembly line. Also pointing in this direction is a quotation from Douglas A. Fraser, Vice President of the UAW's Chrysler Department: "Management has developed a sense of social consciousness that they never had before. Even 10 years ago, the traditional position was that the problems of society were none of their concern. Well that's changed." (Johnson and Kotz, 1972, pp. A1 and A12). One indication of that change is found in the provisions beginning to be made by firms like Xerox to give their people paid leave to engage in socially relevant activities. Comparable commentary from management sources indicate that labor leaders are becoming more enlightened too.

Characteristics of the work situations and organization. The nature of the work constitutes another set of factors that affect the latitude for choice. Continuous process industries are generally cited as examples of situations where schedules must be fixed in order that necessary personnel will be available at all times. Seniority or other criteria may be used to enable an individual to select a preferred shift, but otherwise options are distinctly limited. In similar fashion, machine-paced work requires that a worker be available at a specific place at a given time for a designated period. Also, as Robert Middlekauff of the Ford Motor Company has commented: "Industry is basically wary because it's locked into some work processes by technology that is heavily capitalized. It takes a lot of money to design, install, or rearrange the equipment and the line" (Price, 1972, p. 34).

On the other hand, where the task operations and the tools to perform the task are under the control of a single individual, more latitude is possible. The ultimate in this regard is represented by jobs that are predominately intellectual and creative. Here, since the individual is his own tool bag, he can largely determine how to budget his own time and effort. It is also true that for people operating at this end of the physical-intellectual activity scale there tends to be less distinction between their satisfaction-seeking behavior in work and leisure time. Related to this is the lesser concern that these people manifest about how many hours they work (often greater than standard), while they jealously guard prerogatives to schedule their own time as they think best. Indeed, this discretion is a generally recognizable symbol of professional status. For these kinds of people, "official" changes in work schedules have relatively little impact, and reduction of hours or days provides little felt compensation. In fact, by increasing the gap between themselves and others, it may only create a feeling of added burden.

Physiological and psychological performance factors affected by working time. Not to be overlooked, of course, are the physical and psychological limitations that govern scheduling of work, even though technology has substantially reduced human energy demands. Work days need to be regulated by law and organizational self-interest to protect health, safety and efficiency. It is well established that physiological and psychological efficiency suffers at an accelerating rate as work day length passes certain limits or when rest and relaxation periods are insufficient to match the energy and attention demands of a given type of work. While such results are most obvious where heavy muscular activity is involved, and indices of productivity loss, accidents, errors, sickness, absence, and the like, are easiest to measure reliably, it is safe to generalize that for all types of work and worker populations there are optimum ranges of time for scheduling of work that can be determined. Furthermore, it has been demonstrated that often the worker himself is not the best monitor of his schedule. He tends to respond to discomfort and recognize reduced efficiency after substantial objective decrement has already occurred.

For illustrative data we can look to Tiffin and McCormick's text (1965, pp. 485-491). They indicate a paucity of data from real-life work situations that provide comparisons of various work schedules, but do include citations of the following. Kossoris, et al.(1947) reported on the experience of 78 organizational units in 34 manufacturing plants during World War II, where there had been changes in hours of work from prewar to wartime, or from wartime to postwar conditions, using productivity, injury and absenteeism data. They found that, typically, when hours exceeded 8 per day and 48 per week, for relatively light work it took 3 hours of work to produce 2 additional hours of output; for heavier work more than 2 hours of work to produce one hour of additional output, with about 8/40 as an optimum in terms of efficiency and absenteeism. Injury frequencies and rates showed similar trends as hours increased.

Figure 3, from a report of Ray, Martin and Alluisi (1961), brings together several reports of changes in performance in mental work (multiplication) continuous over 12-hour periods that show various rates of decline.

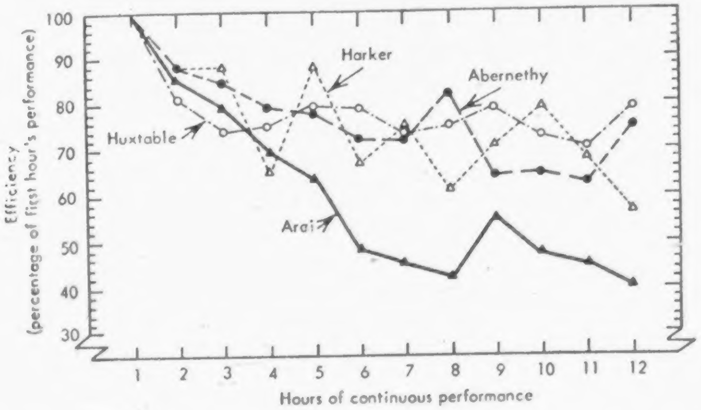

Figure 3. Changes in performance on a mental multiplication task during 12 hours of continuous work. Data based on studies by Arai (1912), and Huxtable, et al. (1946), and others as summarized by Ray, Martin, and Alluisi (1961)

In a physically more demanding activity similar curves are provided for vehicle driving by Herbert and Jaynes (1964) who measured differences in performance on four driving skill tests after periods of 1, 3, 7 and 9 hours (Figure 4).

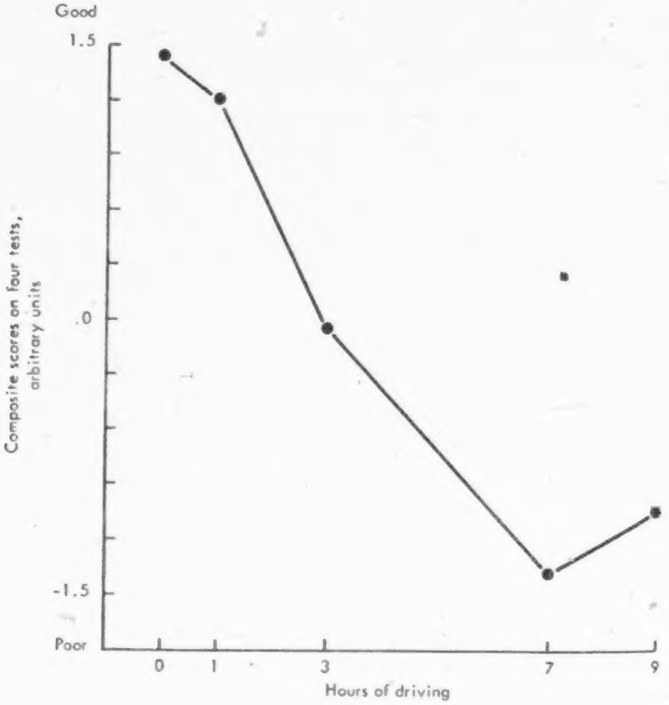

Figure 4. Changes in performance on a combination of four driving tests as related to hours of vehicle driving. The scores are z-scores. From Herbert and Jaynes (1964).

Some inferences on possible outcomes if work is compartmentalized into smaller units of time may be extrapolated from data on the affects of rest pauses on performance, as in the case of Figure 5, from an early study by Farmer and Bevington (1922). This figure is also useful in demonstrating the "warm-up" phase at the beginning of a work period before peak efficiency is attained. As duration of work periods is reduced, warm-up becomes a proportionately greater component of total productivity.

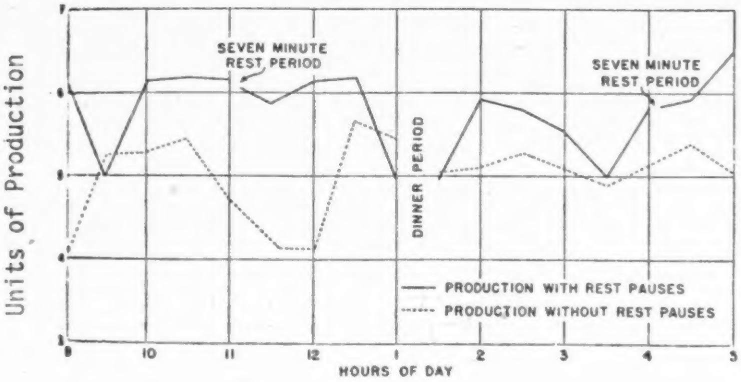

Figure 5. Effect of rest pauses on production for a typical industrial job. From Farmer and Bevington (1922).

It is also possible to think in terms of adjusting to physiologically determined cyclical variations of human behavior. We do not yet have sufficient research to permit fine tuning to take place. However, once a requirement for such information has been established, no large technical obstacles stand in the way of obtaining it. The Omi Railway Company of Japan, for instance, claims that a one-third drop in bus and taxi driver accidents was brought about through studies of each man and his lunar cycle and adjusting routes and schedules accordingly (Ramey, 1972, p. 11). Behavioral concommitants of the female menstrual cycle are common knowledge and the subject of quite a bit of research. Evidence of similar male cycles has been uncovered but less thoroughly explored (NIMH, 1970). A daily cycle has been taken for granted by both men and women, but has been largely ignored as a basis for work planning (Ramey, 1972). Several studies of sleep periodicity suggest that there may be seasonal variations in sleeping hours (Kleitman, 1967, pp 186-187). But the question of the relationship of these cycles to work performance also needs to be looked into further.

Overall, these findings demonstrate the desirability of taking into account empirical measures of performance in designing work schedule innovations appropriate to the characterisitcs of the work and the worker populations involved, and in conducting cost-benefit analyses of such innovations. Too often, such requirements have been neglected.

Means of accounting for satisfaction and profits. Confusion has been induced in the interpretation of results of administrative experiments where organizations have failed to provide separate accounting for the benefits derived from effective use of tangible resources and from the cumulative impact upon individual worker productivity. This confusion has also bred controversy over what should be the worker's fair share of the gains obtained.

Business management, like labor unions, has tended to regard its interests as being most directly involved at the work site, where the relation between energy and talent of employees and the productivity and profitability of the enterprise is most apparent. It is also the place where the employment of human and material resources in different ways can have significant bearing upon the relation between cost and benefits. Greater flexibility in the use of time, space, equipment, materials, and people opens up the possibility for increased business earnings. Thus, for example, we have seen that the current initiatives for a four-day, 40 hour week, and other variations, has come mostly from executives who have seen possibilities for profit through improving the use of their facilities and reducing their overhead. Those kinds of profitability prospects can pretty well be forecast in advance, when contemplating experiments with new work weeks. Assumptions about increased productivity, generated by better employee morale and motivation, are more speculative. As reflected in Chapter III, not much hard data has been generated through research on this subject, and such as now exists does not reveal any startling difference in level of productivity between the new and the old work week.

It should be made explicit that worker satisfaction can be regarded as a criterion of effectiveness for the changes instituted, but this criterion must be considered separately on its own merits. The relationship between satisfaction and productivity is more often talked about than demonstrated (Katzell, Barrett, & Parker; Ferguson, 1958; Brayfield & Crockett, 1955; Vris, 1971). The attribution of an actual increase in individual productivity to higher morale needs to be handled cautiously.

Novelty frequently serves as a stimulus for temporary behavior modification. It is not unusual that as the novelty diminishes, the truth is unveiled that the change itself was impotent. During the past year or so, many glib generalizations have accompanied introduction of plans for four-day weeks and other variations.

Without provision for careful specification, planning, and analysis of results, it is difficult to establish which generalizations are supportable. Also, structural characteristics of time, space, place, pace, and organization of work, often leave little or no room for changes in an individual's work behavior. The unaltered demands of the situation often nullify efforts aimed to alter the worker's motivation and behavior. Disillusionment may set in when short-term success is followed by long-term failure. The baby may be tossed out with the bath water, for lack of ability to discriminate between what is beneficial and what is not, thus losing the opportunity to fully exploit the real benefits that may exist.

To the foregoing are added the constraints resulting from those factors which are external to the work site. One must consider such interdependent factors as transportation, housing, population distribution, activity schedules of others in the family and in other groups, locally and in the society at large, as well as the full range of organized and personalized leisure time activities.

Chapter VI

ROLES OF BUSINESS, LABOR, GOVERNMENT AND SOCIAL INSTITUTIONS

Shared and Conflicting Plans, Purposes and Values

Representatives of trade unions, employers, public authorities and other social institutions are most likely to be consistent and unanimous in expressing the conviction that patterns of working time should be so organized that the individual worker ultimately derives the maximum possible benefits. However, similar agreement is not likely to be found among them as to what constitutes a benefit and as to the best means of realizing the goal of maximization. Proposals for reforms and changes in practice in various fields involved fall within the jurisdiction of a variety of government agencies and other institutions concerned with economic planning, manpower planning, labor problems, education, social security, trade associations, labor organizations, *et al*. There are few points at which an overall assessment of the problems can be made, and where broad and balanced policies can be worked out.

Theoretically, the central point of consideration is the national budget. However, the budget is, at least initially, made up out of submissions made by different agencies. The preparation of the budget is scarcely an appropriate time to bring together aspects of policy affecting flexibility in working life; so many other more important issues are usually involved. Problems of relative priority in social policy arise mainly when overall budget cuts are required; the object then is not to promote social reform but to secure the maximum cuts with the least political and administrative trouble. Further, budget discussions have little influence on choices made in the course of collective bargaining (Evans, 1971).

Thus, it would appear that to effect fundamental change, it would be necessary to make flexibility an explicit goal of policy, specifically defined within a national context, with an organizational structure established to guide implementation. Such conditions would be more favorable for the development of the needed conceptual models and methods of policy formulation. An illustration of a somewhat related experiment in which the aim is to present overall costs of a complex of social programs is the "Social Budget" of the Federal Government of Germany (1970). Perhaps,someday, ministries of "leisure and life quality" will come into being alongside of ministries of labor.

In this connection, it is interesting to note a distinct difference that exists in Europe and the United States. As contrasted to the situation here, in almost every country of Europe, regardless of political or economic philosophy, there are maintained research centers on leisure. These serve to feed data to government or private sectors on such matters as tourism, mass media or adult education; and to provide broad interpretations of what industrialization, more free time, rising affluence, urbanization, television, motor cars, and higher aspirations of literacy, mean to the future of their societies. Even at the university level in the United States programmatic study of these issues is rare (Kaplan, 1970b). Only a few schools like the University of South Florida and the University of Michigan have given them some degree of focussed attention.

Movement toward controlling and reducing hours has most generally been spearheaded by the labor movement. Collective bargaining between union and management has usually been the process through which change has been initiated and the definitions of norms for the length and pattern of working time have been established. Participation by government as the representative of the larger public interest has usually come later, through legislation and regulation, to maintain a reasonable balance of power among the principal parties, to improve the bargaining process, to protect the public interest, and to convert emerging norms into standards, and to apply them more broadly in sectors of the economy where collective bargaining is weak, nonexistent, or inapplicable.

The more flexibile policy toward working hours that seems to be taking shape affects all concerned--public authorities, trade unions, employers, and social institutions. Each of these inclines to approach policy changes from a different standpoint. Not only are new positions and problems generated, but new roles, goals, and organizational structures come into being.

Many employers stand to benefit from a more optimal utilization of time, space, and equipment. Certain employers see no benefits because production schedules appear to be optimized now. Yet, even for these jobs there continue to be pressures to reduce the length of the work week from the workers themselves, especially the younger workers, who may be more inclined than their parents to take their share of progress in terms of more free time (Zagoria, 1972).

Merely reducing time of exposure to work that is basically unpleasant, represents superficial treatment of symptoms--offering a pacifier as panacea. It may be in their best interests for employers to more fully explore ways to enhance fulfillment that the work itself affords. As Herzberg's research suggests, the actual work itself is the most potent determiner of satisfaction or dissatisfaction (Herzberg, Mausner, & Snyderman, 1959). As free time increases and offers a greater range of more psychologically rewarding activities, there may well be an enhancement of the contrast between work and leisure to the increasing disadvantage of motivation associated with work. Greater experimentation with more flexible working hours may also be in order to reduce time and error in planning work scheduling and to provide better guidelines to more optimally conciliate the individual's and management's goals. Comfort and attractiveness of the working environment and compatibility with colleagues may assume more value for employees as basic physical need satisfiers and economic security become available to more people. So, it may make a great deal of sense for employers to look for ways to tailor their working hour policies to be more flexible. For, if they can improve the match between the individual's preferred and/or peak efficiency periods and his time on-the-job, they may be able to increase satisfaction and level of performance. Some employers are serious about doing these things, as our earlier reviews of compacted scheduling and of flexi-time or gliding work time have shown.

We have previously pointed to indications that further work time reductions may not be accompanied by increased productivity as much as in the past. To the extent that working hours approach a stabilized plateau, absolute time at work is removed as a variable available to influence motivation or as an item for negotiation. Hence, more prominence may become attached to such matters as the arrangement of working hours and to benefits that are realized during leisure hours.

That unlimited industrial growth and more consumer goods is a requirement for the good life is being increasingly questioned. If this attitude takes hold, the influence of still another common incentive may be lessened.

If such prevailing assumptions become radically altered, new incentives may have to be invented to fit new life styles.

Changing Populations and Motivations

Because of the historical background of the labor movement and its philosophical underpinning, there is a tendency to stereotype thinking in the image of the blue-collar worker in trades and industries that have been most prominently the subject of collective bargaining by union and management and of wages and hours laws. By the end of the century, the population curve for blue-collar workers may follow the path for agricultural workers; "indeed, the entire area of blue-collar work may by then have diminished so greatly that the term will lose its sociological meaning as new categories, more appropriate to the division of the new labor force, are established" (Bell, 1972, p. 165). It is among the white-collar employees that unionization is currently experiencing the most rapid growth in business and government. Professional and technological occupations are becoming open to organization for collective bargaining purposes, often by having professional associations transformed to take on union-like objectives and functions.

The nature of the working population is far from homogeneous. It is becoming ever more specialized and differentiated in the types of work performed and in the range of tangible and psychological needs and the values represented among its membership (Dubin, 1972), including the membership of labor organizations. Hence, the appeals, values, and techniques of motivation that guided management and labor union leadership in an earlier era are now subject to challenge in both constituencies. In order to effectively appeal to membership with quite different characteristics and backgrounds of experience, they need to fit new situational contexts. Greater diversity in the makeup of the society at large creates even greater complexity, and demands that the adaptive capabilities of our social, political, and economic institutions be designed to keep pace with continually accelerating change.

A large, bureaucratized organization, whether a part of government, business, or labor, that is sluggish in its response to individual demands upon it, tends to lose its credibility as an agent for personal and public satisfaction. Such bureaucracies tend to become alienated from their sources of membership support and come to be lumped together as self-serving groups.

When discussing the parts that government, management and labor organizations play, the role of workers, not alone as members but as individual participants, cannot be neglected. Policies that directly or indirectly define the participant role of individual employees can be significant determinants of the preferences expressed and the choices made by them, and of how effectively such policies can be implemented. Imposed changes are likely to be received with more resistance than those which people feel they had some role in shaping.

Examples of difference are to be seen in the approaches taken by the AFL-CIO and the UAW to consideration of the 4/40 week. The leaders of the AFL-CIO have expressed adamant opposition based upon the views of the elected officers, rooted in defense of the eight-hour day (U.S. Department of Labor, 1971). The UAW took the position, formalized in an agreement with the Chrysler Corporation, that it was willing to engage in joint study of the possibility, with the proviso that any resulting proposal would have to be sanctioned by at least two-thirds of the union members at the outset and again at the end of a trial period. It was felt that the potential changes in life patterns could be very profound. Therefore, a one-time majority vote would be an unfair and insufficient commitment to make a new plan work.

Most of the management initiated plans for the four-day week have sought some degree of prior consultation with employees. However, as we have reported, most such initiatives have occurred in relatively small organizational units engaged in office and light industrial work, in non-union establishments.

"A satisfied need is not a motivator of behavior." Maslow made this point in his theoretical exposition of the "hierarchy of needs" (Maslow, 1964). It has significance here by pointing out that as basic requirements of food, clothing, shelter, health, and safety are increasingly assured, the threats to survival and security that impelled people to join together, as in labor unions, to gain strength and security in the conflict with industrial power may now appear to be diminished; though by no means is the millenium at hand. Thus, adversary relationships of labor and management as the primary means to improve the welfare of the laboring man may come to have less relevance.

Technology continues to displace jobs where major physical stress is involved. Physiological fatigue and accompanying performance decrement or safety hazard have certainly not been erased, but now apply in a decreasing proportion of situations. The professional and technical groups are becoming the central ones in society (Bell, 1972, p. 172). Now, employees who are better educated, are more likely than in the past to expect to reach personally fulfilling goals through their work and leisure activity, and less likely to be dominated by reactions to the threat of pain, discomfort, and insecurity. Following Maslow's model, as needs for security and safety are more nearly satisfied, the needs for belongingness, esteem and self-actualization come increasingly to the fore as motivators of behavior.

New Patterns of Roles and Relationships for Social Institutions

"The evolution of modern management science will ultimately allow every single individual to be taken into full account in the evolution of social planning." This potential and goal was expressed by Anthony Wedgwood Benn, when serving as British Minister of Technology (Schlesinger, 1971, p. 80).

Trends of relationships that may contribute to the realization of viable policies and beneficial consequences for all parties concerned under foreseeable changing circumstances, must focus upon increasing their ability to share a common understanding of constructive goals, objectives, purposes, and values; and of the means to create an improved human society. No doubt, an approach which features much greater individualization of aspiration and life management may severely tax organized management and organized labor's ingenuity and adaptability. However, new tools are available to help with these problems. So, for example, the computers used to control logistics and work processes in the factory and the class assignments for schools have equal potential for adding flexibility to scheduling of work assignments. That is, just as hundreds of options and thousands of choice combinations can be put into an automobile on the assembly line, so can programming now be accomplished that match people in a resource pool with known interests, abilities, and time periods available to work, with the requirements of work to be accomplished over a great range of tasks and time periods.

Given this kind of management tool, new ideas such as those advanced by Einar Mohn, Vice President of the Teamsters Union, at the White House Conference on the "Industrial World Ahead," take on credibility (Mohn, 1972).

Mohn makes the case that our institutions must change to accommodate more sophisticated systems for continually reeducating people and for redesigning their career plans; and they must change to accommodate the flexible scheduling modern living requires. Furthermore, his argument goes, there is nothing sacrosanct about the 40-hour week whether completed in five or four or seven days; nor is there anything inherently right or wrong with a 42 or 46 or 60 hour week--or a 37, 32 or 10 hour week--as long as he can perform effectively on the job. Neither does there need to be an obligation that all one's work take place at one site. All people do not have the same needs. Though both management and unions have preferred the convenience of a 40-hour module, deviations which were difficult to handle until the advent of the computer are now manageable.

So, he says, to use smaller modules in building schedules is to increase the variety and useful range of work scheduling. In many industries two or four hour modules could be used, permitting plant or office to operate four, five, six or seven days a week; and six, eight, ten, twelve, or twenty-four hours a day--to make best use of plant, equipment, personnel and management resources--while expanding options to permit a worker to fit his job time to his family, community, and other personal needs and interests, and to alter this pattern at different stages in life. By 1990, he forecasts, in a free enterprise system such modular systems will come about.

Robert Kahn, in a paper commissioned by the "Work in America" task force, has blueprinted a modular system to suffuse even lower-level jobs with the flexibility of professional jobs.

> He would break down the work day into units (modules) that represent the smallest allocation of time on a given task that is sufficient to be economically and psychologically meaningful. Workers could allocate their time as they saw fit--working a two hour module on one task, the next two hours on another task, etc. The modules would provide variety and a chance to learn other tasks. They would also facilitate the scheduling of one's work to meet personal needs (child care, schooling) and would open up needed part-time employment. One could also accumulate work credits in order to earn a sabbatical. Kahn posits that the benefits from the experiment might be the improved self-esteem, self-development, and mental and physical health of the worker, and higher productivity for the organization. To what extent the costs of the experiment would reduce or off-set the gains could only be determined by trial and evaluation. (O'Toole _et al._, 1972, p. 97).

It is very difficult to legislate flexibility. As witness recent efforts to amend restrictions built into federal and state wages and hours laws, to make possible new patterns of working time, and the long struggle that has accompanied the constitutional amendment giving equal rights and obligations to women. Laws and regulations more often tend to circumscribe than to expand options available to the individual. One role in which government can most immediately take the lead is that which involves support of the research necessary to fill the gaps in understanding: of how individuals, at different levels and in different sectors of the society, perceive and evaluate alternative choices for allotment of their time and energies to paid work, to public service, to education, to recreation, and to maintenance activities; to how these perceptions are generated and modified in the course of life; and to how people can be better prepared to make satisfying choices on an individual basis that still are consonant with the goals and needs of society at large. This is an accustomed role for government as the party responsible for the creation of general policy that newly emerging problems require, and that embrace the welfare of more than a single faction. It would also appear that as more free time and flexible patterns of time utilization decrease the dominance of work as a central factor in life and give more opportunity for higher level needs to be fulfilled in nonwork activities, governments' role and influence in continuing education and recreational spheres will grow. Despite difficulties, government will be challenged to develop new policy instrumentalities that exert positive force to make flexibility a working principle in society.

If our educational systems, coordinated with the world of work, can genuinely serve as institutions for "lifetime learning," there is potential for increasing flexibility, mobility and the psychological richness of lives several-fold.

The concept of continuous education has been very well expressed by Herbert Striner (1972):

> Individuals will look to an education as the key to unlocking a continuously interesting life experience.... Increasingly, individuals will begin to seek out the means of moving from one type of work involvement to another....In our inevitable move toward a lifetime continuing education program, there is necessity for complete subsidization of the program, including economic support to workers and their families, so that they may live according to conditions associated with their normal economic situation even while in education and training programs (pp. 8-9).

Striner (1972) urges the establishment of a "National Economic Security Fund," somewhat like a system in effect in West Germany, integrated with existing unemployment insurance funds, and supported by modest augmentation of contributions to those funds. This fund would permit one percent of the labor force to be engaged in the "self-renewal program" at any given point, for periods up to two years.* Using unemployment insurance funds only for payment of benefits to the unemployed, he regards as archaic. Such a program, Striner points out, would accept the proposition that a nation profits by providing the financial means to encourage adults to pursue continuing education and training as the means for remaining employed or moving into a better paying skill. Thus, we would provide higher income tax payments instead of higher costs of welfare or unemployement insurance; create instead of waste human resources; and motivate continuing purposeful development instead of endless, costly, symptomatic treatment, too little and too late, of stagnation, demoralization and despair.

> In a society of constant change, large numbers of people who remain frozen in their value systems or ways of seeing things become a retarding force in that society. Likewise, in an economy which is based upon technological changes, where the rate of change is of importance, the presence of a large number of adults whose inadequate level of education or training freezes them out of the new economy also becomes a retarding force in the economy (p. vii).

Thus, both humanistic and vocationally oriented learning must be included and all levels and classes in the population must be provided for, as technological change and free time grow hand-in-hand. Striner's close observations of Denmark, France and West Germany, provide examples of programs already in being in which close collaboration exists between labor, management, government, and other institutions to attain these ends.

For instance, as recently reported by the O.E.C.D., in France, new legislation provides a right to absence from work for the purpose of training, and a governmental commission was appointed to examine new formulas for flexible hours of work and other forms of time allocation. In Germany, government and unions are discussing provisions for educational leave and flexible retirement age. In Sweden, A Royal Commission has reported on financial arrangements for a generalized system of recurrent education in response to a trade-union proposal for equalization of educational opportunities for adult workers and former participants in higher education. Educational leave is also on the agenda of the International Labor Office.

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*It has been estimated that the cost of 500,000 workers participating per year could be met by a 0.75% payroll tax (shared by employer and employee) on wages up to $9,000, added to present unemployment insurance taxes (O'Toole, et al., 1972, p. 104).

As adult education becomes a more complete and fully integrated component of our learning systems, one may expect some differences to take shape in the earlier phases of education as a consequence. At present, we may tend to overload the young because they are considered to be acquiring "supplies" for a lifetime (Rasmussen, 1970). As a consequence, requirements for "credentials" tend to mount beyond what real changes in work demands would seem to justify in many instances (O'Toole, et al., 1972, pp. 108-112). If, instead, we think in terms of periodic overhaul and replenishment, we face new opportunities for reducing the perishability of our educational products; for reducing unrealistic expectations; for increasing relevance, motivation and fulfillment, and for reducing people's sensations that they are forever the prisoners of their early history. John Gardner's (1964) vision of self-renewal then can be expanded to embrace the multitude instead of the select few.

The impact of new patterns upon other social institutions probably can be large and potentially beneficial. People who value self-actualization tend to gravitate towards working upon society's problems. Thus, more time and more emphasis may be given to community projects. There may be an upsurge in church attendance and participation. There may be more people who will participate in the education of their own children, both through public and private means. There may be an opportunity for strengthening of family ties (Poor, 1970). But, while many jokes have been made on the subject, it is nonetheless true that if husband and wife and other family members have less working time and have to spend more waking time together, then proportionate effort probably needs to be given to learning to live together harmoniously, if that opportunity is to become reality.

Local governments may try to channel the energy, which some surveys (Gallup, 1963) show, is waiting to be contributed by organizing task forces of unpaid citizens who desire to use their talents for betterment of their community. In recent years, volunteerism has been made an explicit part of national administration programs under both parties.

It would seem that local governments, social institutions, and even employers should support policies that encourage training of people so that they can volunteer their time and talents effectively (Mayo, 1963). However, as volunteerism grows, the problems of managing voluntary organizations become not much different than for those who pay their workers. If other personal fulfillment needs are not met, the volunteer programs falter. As a matter of fact, since participants are far less obliged to stay with a voluntary organization, a premium is placed upon managerial talent that sustains interest and motivation to work.

In the Maslow hierarchy, belongingness, esteem and actualization become the predominant bases of motivation in such situations. It should be noted that voluntary association groups have frequently provided a channel for attaining status and esteem not open to a person in his job. Entry and upward mobility were more open because fewer formal eligibility prerequisites applied. The truck driver who can be a Boy Scout leader climbs a few rungs on the ladder of status. Labor unions and political parties are frequently pointed to as examples. However, with growth, such associations tend to become more bureaucratic and their modus operandi more professional. To the extent that this happens, the range of options for participation and personal growth through volunteer associations will be constricted--society will become that much less open. To be sure, more paid positions come into being in this way. But, if one equates increased opportunity to involve one's self in a greater variety of participant roles in society with enrichment of one's life, then one must urge that deliberate thought to be given to how to preserve and expand those opportunities as more people have more time and inclination to seek them out.

Influences of Flexible Patterns in the Labor Market

A frequent question is what might be the impact of new flexibility of working-time upon stabilizing the labor market? Stability can have several meanings. The conventional one that is applied in this context refers to lack of sharp fluctations in the level of employment and unemployment within an economic system. Here stability is not regarded as synonymous with immobility (lack of intrasystem movement of workers between employers).

Manpower policy can operate in conjunction with more flexible work schedules to help regularize production and employment. It would seem that such flexibility would provide more potential for resilient adjustment to a moderate range of growth and shrinkage of the job market, particularly of a local or temporary sort.

The alternatives should be expanded beyond the dichotomy of work or welfare. For example, special inducements might be offered when signs of slack economy appeared for people to make use of free time for general education, or for special training to equip them for better employment with their present employer, or to facilitate transition to employment of a different kind or at a different location. Such inducements might also be used to bring about shifts in the scheduling of time off to accommodate to variations in business without net reduction of work and earnings. These inducements may be more effective under certain conditions than others. For example, if three days off were scheduled in a work week, one day devoted to training might be relatively attractive, because two free days would remain.

There is evidence that for many employers, a large dividend accrues to a greater range of production, scheduling, work programming, and placement adjustments (Poor, 1970, p. 31). This smoothing effect available to management should contribute to less layoff, slow-downs, absenteeism, and work stoppages. Greater flexibility within and between organizations also opens up the job market to women who only desire to work when their children are at school, older individuals who can work efficiently only a few days a week or a few hours a day, and handicapped workers who are constrained by such things as available transportation or fatigue. As mentioned, turnover inefficiencies may be reduced, since the less attractive jobs may be more tolerable when they can be approached from a pattern more optimal from the individual's point of view. In this regard, for example, United Auto Workers official Nelson Jack Edwards has advocated that employees be given the right to declare which days of the week they wish to work as a way of reducing absenteeism and making possible better planning (Zagoria, 1972).

It has been projected that new job markets will be created as people who have more time to engage in recreational activities, education, and other leisure time pursuits, create new demands for goods and services. For example, the Department of Commerce reports that annually recreation now takes around $28 billion, or 6.2% of consumer expenditures, and Peter J. Enderlin sees a 7% annual growth for leisure-related goods and services in this decade (Kaplan, 1971). However, an increasing proprotion of the newly created jobs are in service occupations, which have relatively low potential for improvement in productivity as compared to manufacturing. Consequently, in this trend there may be a built-in brake upon the growth of the economy that ultimately sets a ceiling upon the increases in leisure time that can be sustained by further net increases in per capita productivity.

It has been pointed out that one effect of flexibility in working hours is to allow more people to hold more jobs. Most statistical surveys in the U.S. have indicated that about 5% of the working force holds a second job (Moore & Hedges, 1971, p. 7), but a recent survey indicates that this value is now around 10% (Seashore & Barnowe, 1971, p. 210). It has been suggested that the result of more flexible working hours will result in a "moonlighting" rate of 20 to 25%, which is the rate in Akron, Ohio, where a six-hour, six-day shift has been used for years in the rubber plants (Ginsberg & Bergmann, 1957). One reaction is to regard this as a positive effect, when one can assume enough jobs available for people who want extra work (Samuelson, 1970, p. 8). And, from a self-fulfillment standpoint, it seems that the best policy would be to regard it as a long-range benefit. On the other hand, this can operate to reduce the number of people who have jobs when jobs are scarce, unless some form of regulatory intervention takes place. The advantages of better integration of policies among employers to accommodate more flexible patterns that include more part-time and extra-time work can be more fully explored.

Joint planning by a group of employers in a given geographic area, perhaps coordinated with unions and assisted by a government agency, could contribute to employment stability. Pooled information about people who are seeking more work, and positions open to them, could be part of a clearinghouse operation on a continuing basis. A private or public agency could perform that function. The key feature of this kind of mechanism, that distinguishes it from public employment services and the private agencies that specialize in providing part-time help, is the positive planning aspect that would aim to optimize advantages for employers and employees on a broader basis than could be provided within a single firm. It might even prove to be desirable, for instance, to have more people employed by two or more firms on a permanent basis. For employers this would be useful particularly with special skills in short supply. The individual, in a combination of part-time jobs might find a set of psychological satisfactions not available in any one job, or certain disadvantages of one position might be compensated by the other position. Mohn's (1972) ideas about a two or four-hour work module system offer intriguing possibilities here. Counseling could be improved, better intelligence on impending surpluses and shortages could be developed, common training requirements could be jointly served, and most generally, manpower utilization that takes into account individual as well as employer and community needs and preferences could be improved. Potential savings exist from reduction of trial-and-error job hunting and hiring, and duplication of efforts. The benefits for such coordinated activity are likely to be greater for small and moderate size businesses. The corporations with large pools of personnel are more self-sufficient. They can provide more varied opportunities and can tap more varied talents within their own domain.

No doubt some anxiousness will be generated that this proposal would increase the amount of needless movement. Perhaps some people would be tempted to try out the machinery, particularly during early stages of development. However, when more openness of information and choice exists, personnel may be more inclined to stay put once they find a comfortable fit, because there is less need to actually move in order to learn and try out the alternatives that exist elsewhere.

Certainly, this kind of collective action is not without problems. The essentials of personnel management and industrial relations are unaltered, and coordination among independent businesses adds a dimension of stress. One example that can be envisioned would be the problem imposed in defining overtime. When a person works more than the standard day for one employer, it is clear that he earns overtime; and when he "moonlights," doing the same work elsewhere, he gets only the standard pay rate. A temptation may exist for employers to make trade-offs of people to save overtime. On the other hand, where a central clearinghouse exists, serving a number of employers, the union may argue for overtime whenever the cumulative total of work exceeds the standard day or week, regardless of how many employers are involved. Another problem that would have to be dealt with would be that of making pensions, vacation and other fringe benefits more comparable and transferable as vested rights and credits of the individual.

The final impact of moonlighting upon the job market will depend upon a host of factors, many of which will be directly tied to the economic state of health at each point in time. However, from a long-range policy standpoint, it does not appear sound to assume that greater flexibility of working hours will necessarily create a less stable labor market. Much depends upon whether certain predictions regarding the number of people who will adopt a self-actualization value during the next 20 years is correct (Mitchell & Baird, 1969). These forecasts see more people participating as consumers, thus keeping the goods and services rising, while an increasing number of people are willing to trade earnings opportunities for free time. The net result would be that the number of people who decide to take a second job or to work longer would be less than might be expected from extrapolations based upon our current value system.

Inferred here is the projection that, on the average, those whose economic needs are greatest will be most likely to use available time to add to income; but that those whose earnings, savings and security benefits suffice to meet their perceived needs will be less inclined to do so. If validated, this assumption would see a long-term trend toward an economic balance with less distinction between "rich" and "poor," since the lower income groups would rise to acceptable life quality levels, while those who have attained a reasonable comfort and security level will be less acquisitively motivated and would be competing less for available jobs. This would represent a reversal of historical trends which show increasing gaps between "rich" and "poor," even as the average income level increases. This idealized model has much to recommend it as a goal, but, so far, supporting empirical facts are missing.

Chapter VII

RESEARCH NEEDED IN SUPPORT OF FUTURE POLICY AND PLANNING

Within the several contexts under discussion, in the previous sections of this report questions have been raised, without much elaboration, and gaps in knowledge, information, and theory have been pointed out.

Now we will move toward more fully articulating what, at this juncture, appear to be the most essential aspects of research required in order to support the development of plans and policies in the more important problem areas that have been identified. We will introduce consideration of these matters with discussions of some general issues of coordination and perspective, and then present ideas for specific research.

Necessary Coordination of Measures at Various Levels

The goals of which we speak, involving increased flexibility and better use of work and free time, are still a considerable distance from extensive realization, even in the advanced industrial nations. But the direction for movement can be seen fairly clearly. In some countries, approximations of useful models do already exist. Within the context of a free society, management, labor and government are jointly engaged in continual analysis, evaluation, and planning that encompass values and objectives for a broad spectrum of life activities. The requirements for a concerted approach become ever more obvious.

> Examination of the quality of working life has not been fashionable over the past twenty-five years. Instead, we have been preoccupied with the mirage of leisure and the bogey of technology. Unfortunately, the problems confronting society do not follow intellectual fashion. Confronting us is the need to accept, as a national goal, both public and private responsibility for the quality of working life in all of productive society, particularly in facing the transition into the post-industrial era, if we are to develop useful social policy in the U.S. and devise workable responses to problems (Davis, 1972).

Not only do we face a need for improved data and methods of research and analysis; we must also re-examine many long accepted premises. Our frame of reference has to shift from a rather narrow concentration upon conditions of employment to the more global perspective embracing the quality of life. Such a shift multiplies the number of variables with which we have to be concerned and the complexity of the interactions that enter into attempts to define the problems overall; and then to subdivide and organize attacks upon these problems in ways that permit us to cope with them in the formulation of meaningful and workable plans and policies.

Changes that are instituted in the pattern of work and leisure life have great impact upon, and are greatly affected by, other major developments in the world around us. Many examples have already been cited. A few may be singled out here for special mention.

The premise to which one subscribes with regard to a nation's ability to provide employment opportunity does, of course, strongly influence one's attitudes toward the variety of patterns of work and free time. One point of view is reflected by Samuelson (1970), who says:

> ....there is no need to reduce the work week merely in order to avoid mass unemployment. The time when there was only a certain amount of work to do is past. Modern knowledge of fiscal and monetary policy can end for all time the ancient scourge of depression and chronic unemployment (p. 8).

The more traditional view, with many adherents still sees opportunities for employment as being relatively fixed at any given time. In this view, reduction of working hours is one means to create more jobs; and overtime and multiple job holding that provides benefits to some at the expense of other workers, should be discouraged. It is also argued that dislocations have local and immediate impact upon individuals, which tend to be neglected when policies are keyed to economic manipulations employing a statistical criterion for a more general and longer term evaluation.

The weight given to these alternative views in the formulation of policy, quite naturally, will have a pervasive effect upon the rate, direction and magnitude of change of work and leisure patterns.

Cross-Sectional Perspective. Among citizens of industrialized nations (and among the educated segments of less advantaged nations that aspire to benefit from greater industrialization) there is a radically increasing awareness and concern regarding the threat to quality of life, if not survival, imposed by contamination of the environment and the upset of ecological balances. This is reflected in pressures for expansion of social and legal controls into geographical and human behavior areas that hitherto have been largely ignored.

The traditional model of ever-increasing material growth as the route to continuing improvement of the quality of life has been subject to reexamination, and arguments for a switch to a steady-state economy model for the most developed countries are being more frequently heard (Meadows, Meadows, Randers & Behrens, 1972). Of course, one way that total output can be controlled is to offset productivity increases to a planned degree by reduction of total time individuals devote to working during a lifetime.

It is not unreasonable to expect that increasing regulation of productive enterprise and work activity that has been true in the past, in the future will be accompanied by comparable increases in control of non-work or leisure time activities. Nor can we overlook population increase as an overlay that complicates all movement toward greater flexibility in the organization of work and leisure, and toward making more choices in life management and style available to the individual. Indeed, one perspective for looking at the questions of use of free time is to view them as related aspects of population issues--population size, density, distribution, growth rate, and flow.

Changes in population policy can also be expected to change the composition of the population in several ways that will influence work and leisure patterns. For instance, changes in age distribution will alter the present capabilities and interest for different types of work and leisure.

Likewise, as changes are made that involve new patterns and a greater variety of combinations of sets of working hours and work weeks in business and industry, the success of such experiments will be heavily dependent upon accompanying changes, to more adequately cover more days of the week and more hours of the day, in the schedules of mass transportation, government services, retail stores, protective services, entertainment, cultural affairs, schools, athletic facilities churches, et al. Under these circumstances, progressively greater proportions of the working force will be thus engaged and considerable adjustment will have to take place. It may come to pass that the pressure of increased population, particularly as it converges upon urban centers, will ultimately dictate such realignment in order to accommodate the burden as society seeks to make more efficient use of the space and facilities it has available.* As we seek to make specific plans for greatest benefit through constructive design of new patterns of work and leisure, we come face-to-face with a great many interdependencies that require delicately balanced and tuned policies.

The effect of transportation conditions is one that is relatively simple to contemplate. The time necessary to travel between home and work and back again reduces the amount of free time available. A concommitant of the increase in affluence and standard of living has been the movement of people further from the work site in search of more attractive living conditions. Theoretically, accompanying the progressive decline in average hours of work there should have been more hours available during which increased disposable income could be channeled into leisure activities. We know that the increased length and congestion of transportation channels has eroded these gains very seriously. Consequently, many organizations (unions especially) view with misgivings experiments that include a ten-hour day in a four-day week, because for one reason, on a "portal-to-portal" basis, 12 or more hours away from home places a heavy physical and psychological burden upon the worker, as well as severely limiting the possibility of interaction during the work week with family and friends. Whether this handicap can be offset by reducing weekly travel time by 20% and by the longer unbroken periods of time off, we do not know yet. Nor is it predictable yet whether this might be counterbalanced by more urban sprawl because more people would choose to live further away from their work. As a reaction to congestion in living space and on the road, public planning and initiatives of business firms are pushing to stagger schedules; to disperse offices and factories; and to bring the workers and work place closer together in new, less concentrated, more attractive settings. Another element that has come into the picture is represented by the suggestion that emerged in Boston recently that a four-day week be instituted in order to cut down pollutants from automobiles.

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*A collateral benefit of more flexible scheduling of time of work and leisure around the clock and throughout the year could be reduction of costs of congestion to consumers, such as premium costs of entertainment on weekends and vacations at peak seasons.

Mass transit is now being incorporated into planning in a deliberate attempt to recapture social initiatives that for so long have been overwhelmed by the pell-mell sweep of the automobile. In the San Francisco area, BART was unveiled in September 1972, as this country's first new rapid transit system in 65 years. Washington is looking for its METRO to start operation in another couple of years. And other metropolises wait to learn how life can be affected by these developments.

Even more complicated are the problems posed by the conflicting schedules within family and friendship groups, and with the availability of educational, business, and recreational facilities. The most obvious problem is that, unless adjustments occur simultaneously, in the economic and societal sector in which individuals function to provide goods and services when they are needed to people who are working on various schedules, the individual who is not working in "prime time" becomes a member of a disadvantaged minority.

Another problem linked with greater flexibility of scheduling during night-time, as well as daytime, is well known to those who have been engaged in shift-work. If a rotation plan requires frequent reassignment of schedules, physiological and psychological readjustment and performance decrement may not be trival problems (Kleitman, 1967, p. 316). In each instance, there needs to be developed a decision as to whether a rotating shift or a relatively fixed shift assignment is best.

Along with increasing complexibility of patterns of working time, it seems fairly safe to predict that there will be more freedom of movement in employment. As people are given more choices in how they distribute the days and hours devoted to work and leisure, a psychological climate is likely to be created that also supports greater freedom of choice and change regarding what kind of work a person wants to do, as well as where and for whom he wants to work. One current estimate is that individuals now in the American work force average 12 different jobs during their work life (Bosserman, 1971). If our hypothesis holds, then greater mobility can be expected, except as restricted by structural factors. Political pressures to reduce existing hindrances will probably develop.

Inadequate individual vesting rights in private pension plans represents one such hindrance. In the U.S., fewer than one in 10 workers who change employers before their official retirement age actually get pension credits from their former employers (Porter, 1972).

An original rationale for private pensions, from the employer's point of view, was that in return for contributing to long-term security of employees he would reduce turnover, and benefit from a more stabilized, skilled and experienced manpower pool. Mobility was not a good thing from that standpoint. But now, less people are willing to accept that to insure security you must surrender mobility. More people have come to regard freedom to change jobs, upgrade skills, and switch from an unsatifactory to a more rewarding position, as a key to individual well-being (Porter, 1972).

Pressures for "portable pensions" mount and government intervention can be expected to effect the change to convertibility among private pension plans that usually exists in government-run social security programs (Striner, 1967, p. 3). Other examples of related issues have been mentioned earlier that apply to vacation and other fringe benefits.

Even these few samples are sufficient to show the necessity for coordination at various levels and the challenge to creative thinking that confronts policy-makers.

Certainly, the choices are not clear-cut. How much individual autonomy can the social and economic system accept? There are undoubtedly limits to what the system can assimilate with regard to flexibility of schedules, diversity of values and life-styles and independent functioning in a self-actualizing mode. Such questions as these require that the structural and psychological characteristics affecting choices across the whole range of rigid and flexible systems be better understood.

A recurrent dilemma that looms is that greater flexibility of working time, greater availability of free time, and increased mobility may have a built-in requirement that social-political systems develop means for greater control of free time activities in order that the benefits may be equitably shared by those who are supposed to have increased their access to them.

An example of the problem that is already with us, in the United States, was the recent announcement of two major innovations in an attempt to curb overcrowding in the country's national parks--a computer reservation system for camp sites and a permit system for hikers desiring to go into wilderness areas (The Evening Star, Washington, D. C., March 2, 1972).

Daniel Bell puts this in the larger context:

> A post-industrial society...is increasingly a communal society wherein public mechanisms rather than the market become the allocators of goods--and public choice, rather than individual demand, becomes the arbiter of services. A communal society by its very nature multiplies the definition of rights--the rights of children, of students, of the poor, of minorities--and translates them into claims of the community. The rise of externalities--the effects of private actions on the commonweal--turns clear air, clean water, and mass transit into public issues and increases the need for social regulations and controls. The demand for higher education and better health necessarily expands greatly the role of government as funder and setter of standards. The need for amenities, the cry for a better quality of life, brings government into the arena of environment, recreation, and culture (Bell, 1972, p. 196).

Longitudinal Perspective. Significant changes in social, economic, political, and individual behavior patterns and values can be expected to materialize over time as a result of substantial structural changes in working time and related activities. Preparation for these eventualities requires the incorporation of the long view in policy development. While some factors in the picture are already quite clearly visible, others are quite amorphous. Long-range planning needs to make provision for assimilating such factors as they emerge. Continuing information input and feedback is essential.

Most efforts to measure the impact of changed patterns of work upon the work force appear to have been rather informal and after the fact. If we are to better evaluate the specific effects of specific changes made to induce greater flexibility and freedom of individual choice, to improve organizational effectiveness, and to better understand underlying dynamics, then more systematic and reliable measurement must be instituted. "After" measures are not enough. "Before" measures are needed for comparison. Retrospective responses--reconstruction of past observations, beliefs and attitudes--are highly fallible and seldom offer a convincing substitute. At present, we have very little reliable data on how individuals and organizations would order preferences among choices and schedules of work and free time activities, and what trade-offs would be most and least accepted.

An example of issues that may arise is reflected in the unpublished study of the United Steelworkers (1967) members in the upper half of the seniority list who get 13 weeks of extra paid vacation every five years under their contract with U. S. Steel. Favorable attitudes predominantly characterized those who had taken extended vacations (EV), and those who would shortly become eligible to do so. Yet, the majority said that they would rather apply the cost of EV toward some other benefit. Most of these wanted more flexibility in using the free time allowed; to be able to trade-off for more vacation time yearly, earlier retirement or other such options. If our society does, indeed, come to accept the proposition stated earlier, that we should make it possible for people "to choose more freely the form that the time off should take and the uses to which it can be put," we see that practical implementation necessitates better information and more sophisticated analyses than are yet available.

Enough time needs to be allowed for new patterns to take shape when evaluating outcomes. Furthermore, those engaged in the early experiments are literally out-of-step with the majority, which may often result in extremes of either positive or negative "halo effect."

As for example, we have already mentioned experiments with new forms of the work week in which immediate enthusiasm of employees may be more a matter of novelty than substance. On the other hand, there was the experience at the John Hancock Mutual Life Insurance Company, where most of the employees involved liked the new arrangement, with the result that even though explicit notice was given in the beginning that the experiment was to run only three months, it was difficult for the managers of the experimental groups, some of whom may have had reservations, to resist the pressure to continue the new schedule for a longer period (Janetos, 1972).

Furthermore, the effects of increasing the length of weekends on individual and family life may not become fully evident for years, because in the beginning, old habits, knowledge and values will predominate and individuals affected are not likely to quickly alter their life-styles. In fact, the new adjustments called for may cause disaffection during the transition period. Again, an example is found in the case of the steelworkers just cited. Comparison of those sampled shortly before actually experiencing an extended vacation with those sampled after they had completed an EV, showed that the actual experience of an EV significantly improved a person's attitude toward increased leisure (United Steelworkers, 1967). This would seem to indicate that until people are actually exposed to situations in which more free time is put at their disposal, they will have difficulty in anticipating and evaluating the uses to which it may be put. Beforehand, in a condition of ambiguity they may be cautious or even antagonistic. But after people gain experience and confidence in the use of free time (e.g., extended vacations at various seasons, adult education) value changes will occur (Kaplan, 1970b).

Probing deeply to provide a cosmic illustration of the challenges which may be ahead that require a long-term perspective, one can build upon a futurist scenario from Kahn and Wiener (1967). We advance these propositions: (a) more and more production is automated; (b) more means are developed to reduce hard work and simplify most remaining individual activities; (c) products and living accommodations are designed to have extended durability or economical disposability and replacement characteristics--increasingly service free; (d) communication facilities (e.g., radio, telephone, TV) make it possiblefor most business transactions to be handled remotely (e.g., retail purchases, banking); (e) a "good" standard of living is guaranteed everyone, including all kinds of non-workers; (f) free time is increased substantially for most people, but not much, if any, for managers and professionals.

Then, those who do stimulating work, and spend more time at it, relatively few in numbers, may become an elite group. People may vie to become "workers," because they are the one's engaged in activities that cannot be programmed. The "leisure class" is then at the lower end of the social scale--a radical inversion in the class structure is brought about by change in cultural conditioning and the values accorded work and leisure factors--polarity is reversed from Veblen's (1954) leisure class model.

> As a game between persons, social life becomes more difficult because political claims and social rights multiply, the rapidity of social change and shifting cultural fashion bewilders the old, and the orientation to the future erodes the traditional guides and moralities of the past. Information becomes a central resource, and within organizations a source of power. Professionalism thus becomes a criterion of position, but also clashes with the populism that is generated by the claims for more rights and greater participation in the society. If the struggle between capitalist and worker, in the locus of the factory, was the hallmark of industrial society; the clash between the professional and the populace, in the organization and in the community, is the hallmark of conflict in the post-industrial society (Bell, 1972, p. 167).

The spectre is simplified to be sure, and hence exaggerated, but it does pose the challenge to society to take an active rather than passive stance in shaping policies that create new ways to add meaning, purpose, and fulfillment to people's lives.

The answer does not lie solely in increasing the availability of consumer goods, though their incentive value is at present high for the majority. With mounting security and affluence, one can hypothesize a decline in the incentive value of consumer goods. "Is it worth it?" becomes a more frequent attitude. This is seen now in the discontent of middle and upper class youth. "They have it made," but are increasingly aimless. As a new generation of better educated young people populates the scene, a very different psychology and new kinds of demands about the character of work are likely to emerge (Bell, 1972, p. 176). Though as yet the ultimate form is unclear, if their opportunities for participation do not match the level of their preparation and aspiration, their alienation may have socially costly consequences.

Until basic policy choices are made and the socio-economic system becomes restabilized in whatever new basic modes come to prevail, it is possible that many innovations with worthwhile potential may be discarded because they are evaluated in narrow perspectives against short-term criteria and not in terms of the longer-term model of broad scope. Of course, this assumes that policy-makers are willing and able, or can learn how to assume the future with sufficient confidence to at least define gross specifications of a model toward which to work, to assess the merits of a multiplicity of competing demands, and to make necessary choices and set priorities. Certainly, the task becomes no easier with the passage of time.

Research Needs

The further we have pursued our explorations, the more it has become evident that the question production curve is accelerating more rapidly than the answer production curve. The gaps in our information are large. The burden of research to fill them is formidable. For example, though social scientists have for many years been measuring and conceptualizing job satisfaction, involvement, meaning, variety, monotony, physiological and psychological demands, work-pacing,cohesiveness, isolation, alienation, communication, openness, and work roles and experiences, to name a few, until recently no aspect of work as it is experienced and responded to by the worker has been measured on a representative and recurring basis (Kahn, 1972, p. 169). A significant exception is the National Longitudinal Surveys, conducted by the Ohio State University's Center for Human Resources Research (in collaboration with the Census Bureau) under contract with the Manpower Administration of the Labor Department. Begun in 1966 and now nearing completion, it encompassed four age-sex groups of workers, from sample areas representing all states and the District of Columbia, who were periodically interviewed over the course of five years with regard to a wide range of labor market behavior and experience in the world of work bearing upon manpower policy (Parnes, 1972).

Time utilization base data. Any consideration of changes in the ways that people use their time, of course, must begin with obtaining behavioral data about what people actually do with their time now, to establish base measurements. This will be cross-sectional data for some defined period that describes the current status at a given time. When provision is made for repeated measurement across time periods, the usefulness of such information is increased tremendously by giving it dynamic rather than static qualities that transform it from a simple description of condition to a resource with far greater exploratory, explanatory and action potential. Then longitudinal data become available to compare activities and patterns of activities, to describe changes, to infer dependencies, and in some instances to make forecast estimates. If we are to do more than engage in post hoc improvisations to accommodate to crises as they arise; if we are to anticipate and plan for change on a scale that can take into account the numbers and interactions of variables required to make planning and policies meaningful and effective, then more adequate provisions must be made to obtain additional cross-sectional and longitudinal data on time utilization. Fortunately, we now have computer resources available that make it possible to conduct the extensive analyses required to meaningfully interpret the information, that even a generation ago was denied to us because the burdens of analysis were too great.

Activity data essentially constitute dependent variables. They by and large constitute the behavioral outcomes of choice processes by the people involved--the sets of action choices selected by individuals from among those that they have the knowledge, power, resources, and discretion to exercise. To complete the picture, in addition to activity data, we need to find out more about the independent variables--the influences determining attitudes, beliefs, knowledge values that establish preferences for one set of alternatives rather than others.

In this context, we should note that development of preference and exercise of choice with regard to time utilization represents a special case of resource allocation. Time budgets have no income side. Time is inelastic, non-renewable, irreversible--a fixed resource. Its expenditure cannot be held in reserve. All of its pieces must be continuously assigned as they become available. Consequently, the process of decision-making in employment of time is perceptually akin to a series of "forced choices." It is a demanding process in terms of human adjustment, particularly in a time-bound culture such as ours.

Time budgets. Traditional time-budget studies take account mostly of one attribute of activity--duration. They rarely have been continuing over any considerable length of time. They lack sufficient depth for more penetrating analysis of social behavior. The timing aspects of the whole course of daily life have been rarely reviewed in context (Szalai, 1971). A larger compass is a necessity for comprehensive study of patterns and implications of changing schedules of work and free time, that tell us who (what kind of person) does what (paid work, housework, personal care, family tasks, rest, recreation, etc.), what else simultaneously, for how long, how often, at what time, in what order, where, and with whom; on a daily, weekly, monthly, yearly, lifetime basis; from the "cradle to the grave" (or at least during substantial time segments). We need to be able to cumulate such information to see how, with the passage of time, for the individual and for the society, these patterns are altered.

From the Multinational Comparative Time-Budget Research Project (Szalai, 1971), we can adopt general objectives for a systematic effort to obtain and analyze these facts on a continuing basis, i.e.:

a. To study and to compare for different populations, variations and temporal distribution of human activities, subjected in varying degrees to different kinds of influences;

b. To develop methods and standards for the collection and evaluation of data pertinent to temporal and other dimensions of everyday activity relevant to the organization of working life and for establishment of conditions for the creative enjoyment of leisure;

c. To establish a body of data, and a clearinghouse for accumulation and dissemination, on characteristics of everyday life under different socio-economic and cultural conditions which could serve as the basis for testing various methods and hypotheses of comparative research;

d. To promote cooperation, standardization of techniques, and the exchange of information among those who have a common concern with related problems, policies, research and evaluation.

A few examples can be given of current issues that might be illuminated if such data were readily available on a continuing basis. We know from gross data that the proportion of the female population in the work force in general, and married women in particular, has markedly increased in recent years. But those involved in the design of manpower policies and programs have been handicapped by the dearth of generalizable data dealing with such questions as: What are the characteristics of the subpopulations and the other determinants of the flow of women into and out of the work force and back again; what is the timing; and what are the concommitant variations in their own patterns of activities, and of the others with whom they interact significantly. We could also use, for similar purposes, better information affecting the employment of the elderly and the handicapped. In like fashion, we have been able to recognize gross patterns of change in the activities of college age young people, but college administrators and educational policy makers in government have often been caught by surprise by sudden shifts in quantity and direction of student flow. Thus, confronted by a "zero draft" condition in the military sector, we find great uncertainties in policy circles as to both short and long term implications, both on and off campus.

Looking ahead, periodic accumulation of facts on activity patterns will permit us to answer questions about how roles and activity patterns change as the amount of individually disposable time increases. Do churches, clubs, community projects, or political activities gain or lose participants? Are parents engaged more in the education of their own children? How are the role and responsibilities of husband and wife reassorted? Is there more simultaneity of work and schooling? Are friendship patterns altered? What are the trends in part-time and multiple job holding? How is the incidence of self-initiated job change and residential mobility affected?

It might be useful here to sketch out one example of a type of study of this sort that could be conducted. Let us take for this illustration the research question: How do changes to different work schedules interact with the changes in the ways that people use time on and off the job? This illustration is schematically represented by Figure 6.

What we have here is a longitudinal study of changes that take place during the transition to a new work schedule pattern. Our schematic example shows six patterns. To keep it simple, we will assume the same total number of hours per week for all six patterns. The first column represents a five-day week with a fixed schedule; the second column represents a five-day week with a flexible schedule (flexi-time); and the remaining columns represent four-day and three-day work weeks with fixed and flexi-time alternatives. The first column is, of course, the "no change" or "control" condition; the others constitute the experimental conditions.

The target populations for this hypothetical study would come from organizational units from cooperating companies or government agencies. As represented here, data would be obtained after several periods following the inception of the experimental change (six are shown in the example). The data could include, as illustrated, information regarding various descriptive aspects of the activities in which the sample populations engaged during four categroies of time; i.e., working hours, non-working hours on work days, non-working days in working weeks (e.g., week-ends), and vacations. The activities data in the boxes could be categorized on and off the job as to duration, sequence, type, and quality.

Further subdivision or expansion of analysis is obviously possible to conceive. Thus, "quality" can be further subdivided in terms of various individual and organizational performance variables at work. Indices of quality of free time activities can be developed. Satisfaction measures of various types are examples of a kind of quality index applicable to work and non-work situations. The variety of comparative analyses represented in the Figure 6 diagram, can be augmented by expanding the experimental sample of organization units and the populations in them to take account of such factors as size of company, unionization status, nature of product or service, transportation facilities, population density, and so forth.

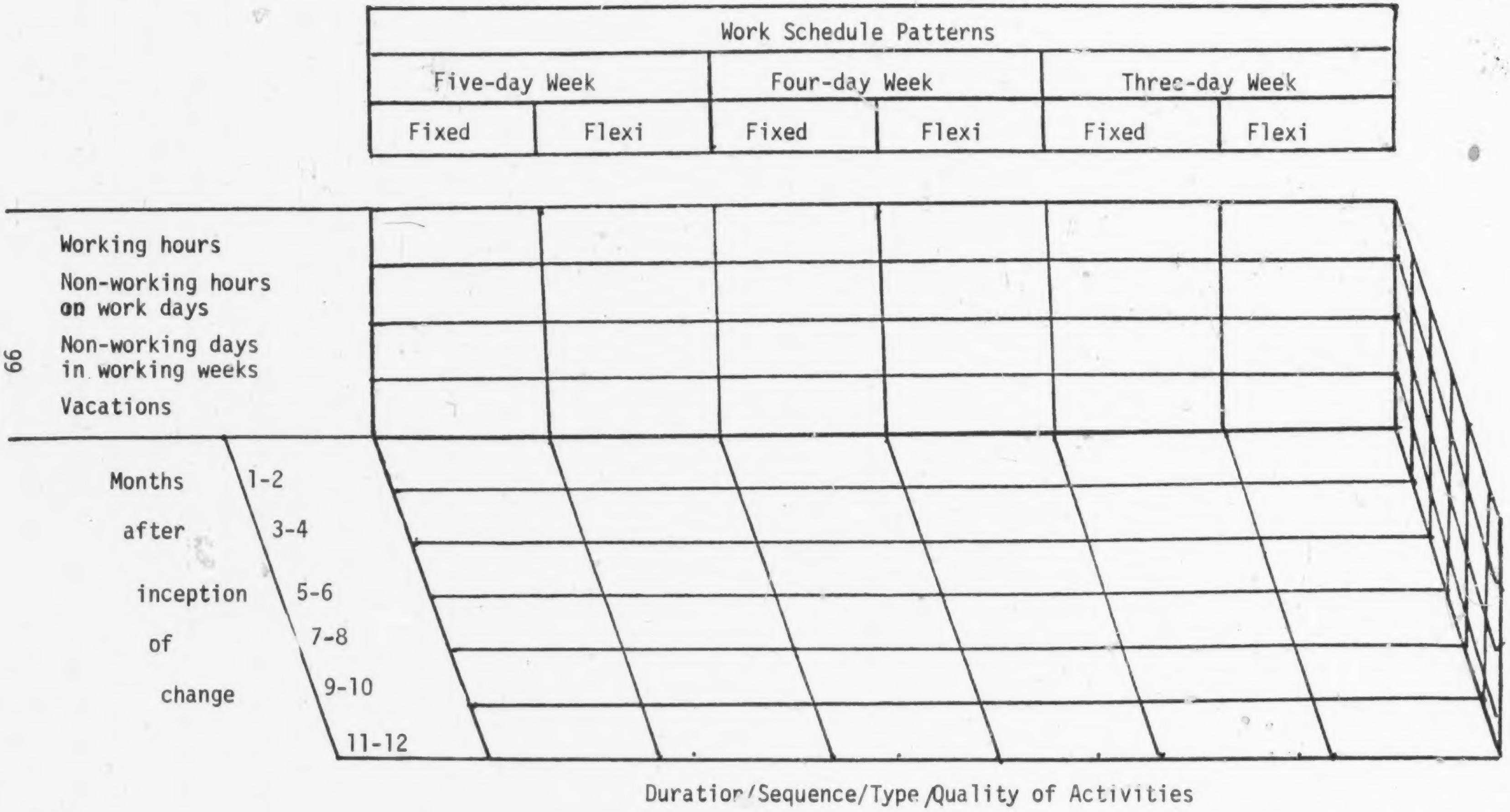
Work Schedule Patterns
Five-day Week
Four-day Week
Three-day Week
Fixed
Flexi
Fixed
Flexi
Fixed
Flexi
Working hours
Non-working hours on work days
Non-working days in working weeks
Vacations
Months after inception of change
1-2
3-4
5-6
7-8
9-10
11-12
Duration/Sequence/Type/Quality of Activities

Figure 6. Schematic example of a study of how changes to work schedules interact with changes in ways people use time on and off the job.

It is not our purpose to provide an illustration that is all encompassing, or to undertake consideration of limits of feasibility. We can only offer this as a demonstration of a generalized approach.

It is, however, reasonably clear from this schematic example, as has been said before, that as more flexibility comes to characterize the disposition of people's time, it is quite certain that the need for more and better information and better coordination of its use will become more pressing as questions of these sorts multiply.

Preference surveys. It might very well be useful on an industry-wide, regional, or national basis to also conduct a continuing series of surveys of the "consumers" of time, covering the kinds of alternative choice preferences in work and free-time schedules and activities with which we have been dealing. "Barometric" readings over time could be useful measures of impact and effectiveness, description of current condition, sensors of stress and problems; bases for forecasting, developing perspective and formulating theory; and as guides to policy and practice. That such information can be reliable and practically useful is well documented by Katona's periodic surveys of consumer intentions emanating from the University of Michigan.

Of course, because there are practical limitations and because extensive and repeated samplings are not necessary in every case in order to obtain useful results, there will continue to be need for many smaller scale survey studies.

Whatever the scope and scale of research to be employed, it is easy to offer some samples of the types of questions that might be worthwhile to address.

One set of questions that is obviously of direct interest concerns people's preferences expressed for free-time activities, and the combinations and tradeoffs that they consider to be most acceptable, when available, from among such alternatives as additional paid work versus education (vocationally and nonvocationally oriented), or recreation, or cultural activities, or family, friend and home-centered activities, or voluntary public and social service work; day versus night work; shorter work days versus longer vacations, more days off per week, more days off per month, or earlier retirement; and close-in residence versus longer travel to preferred location. Relevant comparisons would be based upon demographic variables such as age, educational level, socio-economic status, sex, marital status, number of dependents, occupation, type of business, industry or profession in which employed, geographical location and the like. No doubt it would also be desirable to make comparisons to establish "what constitutes a benefit" and what are the relative values assigned to them by employees in different categories, as well as in various leadership groups such as employers, labor union officials, public officials, educators, and so forth. Linked to this might be studies of the changing attitudes of business and labor leaders toward getting involved in "off-site" activities and the attitudes of employees toward having them involved.

Administrative experiments. Having given some indications of the research data needs that can be derived from general surveys of activities and preferences, we now consider studies that are more closely connected with the institution of new schedules of work. Introductions of three and four-day work weeks, like those we have included in our earlier discussions, represent examples of recent vintage. A few of these have included attempts to obtain data and carry out analyses of the effects of the introduction of these changes upon the employees and the employing organizations. Larger numbers of these, carried out more thoroughly with better controls and more carefully articulated objectives and hypotheses,would certainly add to the store of knowledge necessary to guide future developments. A research effort in which a number of organization units joined in a coordinated programmatic approach would be an appealing prospect. Though research projects in an actual work setting must be subject to practical constraints, it is felt that given the acceptance of the importance of the issues involved that already exists in certain labor and management circles, interest and ingenuity can be exploited to design theoretically and practically useful projects. Here we will volunteer one plan of attack. There are, of course, others.

The first step would need to be the identification of organizations prepared to make at least a tentative commitment to cooperate in the project. To provide an initial basis for discussion and generation of interest among prospective collaborating organizations, material could be drawn from this report, augmented by others, such as James Wilson's (1971) study of attitudes toward the four-day week, cited earlier, a pilot study of productivity effects in eight companies experimenting with revised work schedules being conducted by Sol Swerdloff for the Bureau of Labor Statistics, and the proposals of Einar Mohn (1972), of the International Brotherhood of Teamsters, to increase the potentialities for flexibility by creating two or four hour work schedule modules.

If possible, different types of organizational units should be involved--e.g., one or more of a largely administrative type with little interface with "people consumers;" another type that is largely administrative with considerable "people consumer" interface; another that is primarily in fabrication and assembly, another that is an around-the-clock primarily service operation (like a hospital or police department), etc. Government agencies could be used in some of these categories, and might be a convenient group to start with. A desideratum would be that the participating organization contains a number of similar units so that "experimental" and "control" unit data could be compared.

After initial contacts and preliminary work with the tentative cooperators, those which met the selection criteria developed and that were willing to make a firm commitment would constitute the final sample.

Conferences and interviews, first with the tentative group, and then more intensively with the finalists would be held, including key management and employee representation, to expand and refine knowledge applicable to the specific situational contexts and the chosen project areas, and to generate, define and refine, hypotheses and research plans.

The implementing research plan would probably include an organizational systems analysis; interviews and conferences across the levels and types of managers and employees represented in the experimental organizational unit to obtain factual information;as well as attitudes or opinions bearing upon a variety of work schedules and related activity patterns, problems and promises. Among the kinds of factors included might be employee preferences, management preferences; constraints inherent in the nature of the goals and of the products and/or services provided; consumer/customer preferences; and anticipated peripheral effects (i.e., not directly concerned with production of goods or services in the work setting) on employees, management personnel, consumers, customers, public services, etc. A plan for analysis of data would also be included in the plan.

The results would be reported with special attention to the following:

a. Suggested alternatives for change that appear most relevant and appropriate for consideration by each participating organization, accompanied by information available to use in the decision-making process, such as, advantages and disadvantages of each alternative and the possibilities for tradeoff, organizational state of readiness for change, decisions that have to be made, implementing actions that have to be taken, and requirements for additional information or further study;

b. A plan for evaluation of the program adopted and/or of the actually implemented changes, keyed to a, for each organization;

c. Generalizations across the several organizations, and by extrapolation to the "world at large," with regard to theoretical models and hypotheses needed for further research, and practical guidelines that others might be able to use (based upon what we "know") to make their own analyses, plans for change, evaluations and decisions.

The final phase of this proposed project would involve moving ahead with implementation of changes and with further research and evaluation, according to agreed upon plans, that meet the needs of the specific organization, but which would also incorporate in the design a conceptual scheme that permits testing models and hypotheses that can be generalized beyond the limits of a single organization.

Taxonomy and criterion development. Applicable to the kinds of studies shown here,and others covering a broad front or continuing in duration,is an extensive set of problems of measurement and comparability. Past studies in this domain have been limited in their generalizability because they have had limited objectives and have coined definitions of variables and have contrived methods of sampling, data elicitation and measurement that have been correspondingly limited. Thus, with regard to studies of allocation of time to activities, Robinson and Converse (1972, p. 21) estimate that perhaps a half-dozen studies scattered over the past 35 years were sufficiently vigorous and multipurpose in nature to be of much general interest; and even these were replete with methodological defects and incomparabilities.

Likewise, as Bauer and Fenn (1972; 1973) and others point out, efforts to audit the effects of introducting changes in work time scheduling are beset with confusion of methods; uncertainty in selection and definition of criteria of success, achievement or satisfaction to be measured on quantitative or qualitative dimensions; problems in locating information or designing techniques to get it; and insufficient experience to guide assignment of social values and to determine meaningful cost/benefit relationships.

Consequently, any substantial investigations of the kinds called for here, if they are to offer more than a narrow base of relevance and utility, must be preceded by rather strenuous efforts to create a taxonomy (i.e., a rigorous language of definitions and classification) including explicit specification of the dependent variables (criteria) and their valuations. A good summation of these requirements is provided by Robert L. Kahn (1972, p. 165):

> In short, the idea of social indicators implies social action as well and the elements of static and dynamic description, explanation, value choice, and technology for implementation are the requirements for appropriate social action. On each dimension we deem sufficiently important, we must know our position, our present rate and direction of movement, the causes and consequences associated with these facts, the attainable state we consider preferable, and the approaches that can be taken at different points in the causal linkage in order to bring about desired change.

As a beginning it would seem worthwhile for a basic study to be undertaken that could involve collaboration among government agencies such as the Bureau of Labor Statistics and the Census Bureau and the professional and management societies having most direct interest in the matters we have had under consideration here.

System analyses. Changes in the schedules and values associated with work and leisure, such as we have been talking about within specific situations, create imbalances in the status quo and generate new problems and demands for readjustment, reconstruction, and reorganization that are magnified many fold when we take the total national social, economic and political system under scrutiny. Thus, at the national level there are substantial impacts upon virtually every agency of government. Neither the scope of this project nor the competencies of the authors warrant an attempt to spell them out here. We can only call attention to the need for sensitivity to the developing issues and the needs for constant coordination, and briefly illustrate with a few questions that our study suggests are highly salient.

In the domain of education and training we have earlier touched upon needs for reexamining content, structure and scheduling to accommodate to new patterns for working time and leisure. We have pointed to more urgent needs to provide for continuing education and to determine who shall share accountability in providing it in various forms at various times--the individual, the employer, the union, the schools, the government. Thus, for example, where does responsibility reside to fill the void in counseling for leisure time pursuits to complement existing occupational counseling services--to plan an extended vacation, prepare for retirement, or to purchase a second home.

Transportation and city planning, depending upon the adequacy of the assumptions made and the policies developed, can impede or facilitate attainment of benefits that may exist in more flexible life styles and schedules.

As flexibility is accompanied by complexity for an increasing population, a fundamental challenge exists for a free society to promote the benefits of flexibility while diminishing the spectre of control that complexity induces. To insure security must you surrender mobility? We may well ask, how much autonomy and self-actualization can the social and economic system assimilate? A thorough reexamination of structural constraints upon choice and change is called for to expand the capacity of the system to achieve such assimilations.

These are but a few of the myriad issues that need to be examined within global contexts to which tools such as systems analysis, simulation modeling, computer programming, decision process principles and Delphi inquiry can be applied. New tools may have to be developed. More satisfactory models of human resource economics and of methods for human resource accounting, to which we have alluded previously, fall in this category of requirements.

Some theory and hypotheses. In this section we will make the transition from the particular needs for information and methods for obtaining same, to some final thoughts about theories and hypotheses that arose in the course of earlier exposition. Most of these fall within a longitudinal perspective with a future reference dealing with changes in work-centered and leisure-centered values and motivations and their possible concommitants in behavior change.

As the proportion of time and activity in non-work increases, shifts will be likely to take place in the ways, means, and places in which certain basic satisfactions are sought, and the meanings and values people ascribe to work and leisure variables and their interactions.

We have previously given attention to comparisons of motivation and incentive values of various forms of free time with other benefits. Further study is required to determine the extent to which time off does or does not serve as an incentive, on the one hand, to increase productivity and raise standards of performance, or on the other hand, as a compensation for unpleasant, dissatisfying characteristics of jobs.

Some examples of hypothesis that might be tested are:

a. As freely disposable time increases, the contrast between peoples work-oriented and leisure-oriented values will be enhanced.

b. People in occupations that are primarily intellectual and creative (where the individual is "his own tool kit"), tend to manifest less distinction between their values and satisfaction-seeking behaviors in work and free time.

c. Management is reinforcing worker values with respect to leisure that it does not share.

d. Those who make good adjustments related to goal achievement in employment are likely to make good adjustments in other activity spheres

e. Free time is associated with an increase in self-actualizing behavior.

f. As less time is required to be spent on the job, identification with the interests of one's employer is decreased.

g. Increases in multiple job holding diminish the exclusive loyalty that a single employer can command; hence, more job-hopping and turnover is experienced.

h. As the need to devote time to work is reduced, the identity and status that derives from work affiliations is diminished, and compensatory mechanisms will operate to seek out status and identity in other channels (such as recreational activities and voluntary organizations) or, where these are blocked or lacking, in maladaptive behaviors.

i. In the future, the concept of a career will incorporate new values endorsed by society,that support more planned interorganizational mobility and interruptions of work by periods devoted to leisure and learning.

j. The credo that continuing industrial growth and more consumer goods is a prerequisite of the good life will come to be increasingly questioned; qualitative indices will gain weight as compared to quantitative indices of life quality in determining choices of time, energy and resource utilization.

To put the pieces of the puzzle together so as to improve policies and decisions with regard to changing patterns of work and their implications for life quality, there needs to be more serious attempts to repair the lack of global theory and models so that we can fruitfully interrelate issues which are sociological, psychological, economic, legal and philosophical.

Crucial to the attainment of such goals, where the outcome is expressed as quality, is the development of adequate criterion rationales and definitions as the basis for structuring the indices of quality. Ultimately the formulations of such definitions of societal objectives are the responsibilities of the executors of policy at high levels of government. The work that in recent years has been done on methodologies for social audit shows that development in this area is at a primitive stage (Bauer and Fenn, 1972; 1973; Sheldon and Moore, 1968). It needs to be pressed forward. The requirement for this criterion data stands on the critical path to the dimensionalization of the needed models.

To recapitulate, we need to develop information to fill the gaps in our understanding of what individuals at different levels, with different backgrounds, in different sectors of society, actually do with their time; how they perceive and evaluate choices for allotment of their time and energies to paid employment, to work related activities, to life maintenance activities, and to the disposition of free time in learning, recreation and relaxation, cultural pursuits, public service and social service; and how their perceptions, values, and behaviors, individually and as members of various groups, are generated and modified in the course of life, within the context of sometimes evolutionary and sometimes quite revolutionary alterations imposed in an emerging post-industrial era. We have need for this information to formulate more sophisticated theories and to invent and test methods to better prepare people to make these choices and to integrate them behaviorally in planning and experiencing a more fulfilling existence. The major institutions of society--management, labor, education, government, et al.--have need for this information to formulate policy and to create the organizational structures that will facilitate adjustment and will increase the likelihood that the new uses and distribution of people's time do indeed add to life's quality.

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